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"Crossing the River While Feeling the Rocks"

Incremental Land Reform and its Impact on Rural Welfare in China

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A total of 20 case studies are included in this project, each one based on a synthesis of the peer-reviewed literature, along with other relevant knowledge, that documents an intervention's impact on hunger and malnutrition and the pathways to food security. All these studies were in turn peer reviewed by both the Millions Fed project and IFPRI's independent Publications Review Committee.

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Notices

[1] Effective January 2007, the Discussion Paper series within each division and the Director General's Office of IFPRI were merged into one IFPRI–wide Discussion Paper series. The new series begins with number 00689, reflecting the prior publication of 688 discussion papers within the dispersed series. The earlier series are available on IFPRI's website at www.ifpri.org/pubs/otherpubs.htm#dp.

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ABSTRACT

Between 1978 and 1984, a massive shift from collective to household agricultural production took place in China. These incremental reforms, which Deng Xiaoping called "crossing the river while feeling the rocks," eventually gave 95 percent—160 million rural Chinese families—the right to oversee household plots, leading to stunning gains in productivity.1 This reform, the Household Responsibility System (HRS), provided strong incentives for farmers to increase labor and improve land, since they could profit from any marketable surplus they produced. Meanwhile, the state set quotas and purchased crops, providing reliable markets for increased production. It also strongly supported farmers by managing irrigation and the agricultural extension system. The state's earlier investments in rural nonfarm infrastructure paid off under the reforms, as workers released from agriculture by the more efficient use of labor found employment in local rural industries. In the years following the property reforms, the quality of life in rural China improved dramatically: per capita rural income more than doubled from 1978 to 1984.

Despite the success of the HRS, the enhancement of property rights is an ongoing reform process. Landholders depended on tenure agreements that could be changed at any time. Rural areas did not have the same right to profit from appreciating land values as urban landholders. As cities have expanded rapidly, municipalities have requisitioned rural land and issued it to new users at urban prices much higher than that paid to the rural villages. The policy debate about the appropriate pace for strengthening rural land use rights continues.

Having examined the substance, process, and effects of the reforms, this paper asks what lessons from the reforms are relevant for other developing countries. In spite of differences among countries, some elements of the Chinese reform experience seem highly relevant to others engaged in the struggle to develop.

Keywords: Millions Fed, Food Security, China, Land Reform, Land Tenure, Collectivized Agriculture, Household Responsibility

[1] The Deng Xiaoping quote, suggesting the tentative nature of reform steps, is cited in Gulati et al. 2005, 47.

1. INTRODUCTION

In 1977, faced with near famine conditions, poor villages in Anhui Province experimented with a return to household farming, which led to impressive productivity gains. Facing up to the weak performance of collective agriculture and near famine conditions in many areas of the country, the Communist Party in 1978 reluctantly embraced these remarkably heterodox experiments. The new system was known as the Household Responsibility System (HRS) because parcels of collective land allocated to farm households to manage came with obligations to produce specific quotas of key economic crops and to sell them to the state at fixed prices. Once permitted, the system spread throughout China like wildfire, so that four years later the communes' land, over 90 percent of the country's farmland, had been parceled out to more than 160 million farm households. This remarkably rapid implementation was only possible because the reform was largely self-implemented by local communities.

The state procurement system provided the new family farmers with a guaranteed market for a quota of a key economic crop, albeit at below-market prices. After 1977, the state raised its procurement prices; in 1979, alone state procurement prices for major crops, on average, increased 22.1 percent. The new family farmers lacked full security of tenure; they had only annual land use contracts and had to deal with periodic reallocations of land among households to maintain equality in landholding. Nevertheless, the opportunity to work the land themselves for the direct benefit of their families elicited a remarkable response from farmers.

By 1983/84, annual household investments in agriculture averaged more than twice the annual combined state and collective investments during the same period. Production grew rapidly: crop output grew 42.2 percent during 1978–84. The annual growth rates for the three most important crops, grain, cotton, and oil-bearing crops, averaged 4.8, 17.7, and 13.8 percent, respectively, between 1978 and 1984. (During the preceding 26 years the average growth rates for these crops had been only 2.4, 1.0, and 0.8 percent per year, respectively.) The changes in farm scale and organization of production, which had posed difficulties in many land reforms elsewhere, seem to have been eased by the fact that local institutions such as the township and collective continued to support agricultural development.

While increases in state procurement prices clearly had some impact on production, most studies suggest it was surprisingly small: the change in the form of production organization, the HRS reform, accounted for between 50 and 85 percent of production increases. Farm families responded to their opportunity to sell a part of their production at market prices by investing large amounts of labor and inputs to exceed their quota, while at the same time diversifying their production into nonquota crops. Labor supervision by the household was far cheaper and more efficient than that of the commune and brigade, and with the outflow of surplus labor, labor efficiency and production efficiency generally increased. Area cropped area declined slightly but production still grew.

The labor that had been underemployed under the commune system was now released; it needed to find work, and given the tight controls on labor migration, it had to be local work. Townships and collectives took advantage of this and of new revenue under the HRS to develop township and village enterprises (TVEs), building on the basis of the commune industries and large public investments in infrastructure during the commune period. The TVEs were public but produced for the market, and they grew rapidly. In 1978, the TVE gross output value was just 7.2 percent of China's total output value. In the 1980s, 60 to 70 percent of rural output value was produced by TVEs. The number of firms increased from 1.5 million in 1978 to nearly 25 million in 1994, while the number of employees increased by a factor of 4.5 and total output value by a factor of 80. This sector grew far more rapidly than the state industrial sector.

In the years following these reforms, the quality of life in rural China improved substantially, reducing (though not nearly eliminating) a long-standing gap between rural and urban households. Between 1978 and 1983, per capita rural income more than doubled. The rural poverty rate fell from 76 percent in 1980 to 23 percent in 1985, and over the 20 years after 1981, it fell to 8 percent. Poverty increasingly became a regional issue, related to resource endowments. Food access and affordability

improved. Energy intake increased by 12 percent in the first four years of the HRS reforms (1978–81). Energy intake as a proportion of the minimum rural requirement was 122 percent in 1978, and in 1979–81 it ranged between 140 and 143 percent. After 1978, consumption of foods other than grain rose rapidly, with an increase of 40 percent in the areas devoted to nonquota crops.

By the end of the 1980s, growth rates in agriculture slowed. A policy debate ensued over whether it was necessary to strengthen farmers' rights over their farmland, which remained collectively owned and farmed on contract. The government announced gradual increases in the duration of production contracts, with longer contracts for areas requiring more investment such as those that reclaimed degraded hillside land, and it discouraged frequent redistributions of land. Initially optional, these changes have now been built into new land legislation. There is an emerging consensus that China should move toward fuller and more marketable property rights in rural land but also a consciousness that land is performing important social security and safety net functions. A debate continues on how to balance the benefits to efficiency of liberalization of farmers' rights toward marketability and the losses to social security consequent to reforms that would make rights more marketable. Reforms have come painfully slowly.

Rural households are still seriously disadvantaged. While urban landholders, with more marketable use rights, enjoy the benefit of appreciation of the land they hold, rural people do not. This is most painfully evident at the interface between rural and urban land, where municipalities compulsorily acquire rural land, compensate rural landholders modestly, and then sell that land to urban users at much higher prices, generating huge public revenues that have fueled both impressive urban infrastructure development and corruption in the use of these off-budget funds.

The HRS reform and the other reforms it sparked have contributed greatly to the economic development of China and the welfare of its citizens. Many developing-country policymakers, in thinking through their own reform programs, should consider the lessons learned in China.

2. LAND REFORM IN CHINA

During the period 1978–84, when Chinese communities implemented a decollectivization reform of stunning scope, the management of about 95 percent of farmland in China was returned to more than 160 million farm households. The gains produced were equally impressive. Production and productivity per hectare increased markedly, with readily discernible impacts on the incomes, food security, and nutritional levels of Chinese families. The efficiency gains in agriculture released a large amount of surplus labor that had existed under collective cultivation, and this in turn fueled the development of China's equally remarkable rural industrialization, accomplished through development of TVEs. In more recent years, the government has turned its attention to gradually strengthening the property rights of the households that were reform beneficiaries.

What was the basis in economic theory for this land reform and its success? The economic literature recognizes two fundamental institutional reforms in the land sector: land reform and land tenure reform. There is a consensus among economists that where labor is relatively cheap, household farming enjoys advantages in labor supervision that make it more efficient in using land than larger-scale operations, even though the latter may be more highly mechanized. Few larger-scale economies exist, and those that do are not in production itself but in primary processing and marketing. Most often, historically, large agricultural holdings have not been the product of market forces and have less to do with efficiency than with power, domination, and ideology. Land reform is the scaling-down of those large units, usually through a process of subdivision, to smaller, more efficient farm sizes. When these are given to families in secure tenure, there is a significant distribution of wealth and economic opportunity in the society. The principle is the same regardless of whether one is reforming Latin American *latifundia* or collective farms in socialist contexts (Binswanger, Deininger, and Feder 1995).

The economic literature also asserts that the quality of land rights affects the landholder's investment incentives. Tenure security, the confident expectation of being able to continue in possession of one's land long enough to recoup investments in land, and even to leave the land to one's heirs, strengthens substantially the farmer's incentive to invest. This is especially important to investments in activities such as soil building, tree planting, or terracing, which enhance the long-term productivity of the land. The rights to transfer and mortgage land are again asserted to affect both investment incentives (since the investment is reflected in the market value of the land) and credit access (because the land can be used to secure loans). Land tenure reform involves increasing the robustness of the property rights of the producer, increasing incentives to invest and thus the productivity of the land. This is a core understanding, reflected in policy prescriptions of the international development community and in particular the World Bank (Feder and Feeney 1992; Deininger 2003).

The literature on rural reform in China typically breaks the rural reform into the "incentive reforms" that dominated the period 1978–84 and the gradual market liberalization that began in 1985 and extended through the 1990s (see, for example, Huang, Otsuka, and Rozelle 2007). This paper instead focuses on the two land reforms. The first reform, the return to household farming from collective agriculture, was together with price reforms part of the "incentive reforms" that took place during the period 1978–84. The second, a gradual enhancement of property rights, paralleled the market liberation beginning around 1989 and ongoing today. The first is considered a spectacular success, while the second remains incomplete and its effects are still being assessed.

The constant throughout these two reforms is what Chinese documents refer to as the "two-tier system:" public (collective or state) ownership of land and private-use rights to land rather than full private ownership for users. This conceptualization, with its retention of public ownership of land, has made it possible for a communist state to embrace a reform process that has moved China ever closer to de facto private property in land.

This paper focuses primarily on the first reform, known as the Household Responsibility System (HRS) Reform It explores its impacts on production, investment, food availability, and welfare, but it also covers the ongoing process of strengthening producer property rights, with some limited evidence

regarding the actual and potential impacts of this second reform. It finally turns to the "unfinished business" of land reform in China and the extent to which lessons learned there may be applicable elsewhere. Table 1 summarizes the changes that took place during the reform period.

Table 1. Summary statistics of changes in rural China, 1978 to 1984

	1978	1984	%
Rural households impacted by the land reform (million)	160		
Changes in grain yield (kg/mu)[a]	169	239*	41.42
Changes in food production (100,000 tons)[b]			
Grain	3,047.5	4,070	33.55
Cotton	21.7	62.5	188.02
Oil-bearing	52.2	118.5	127.01
Tea	2.7	4.1	51.85
Sugar	211.2	396.6	87.48
Meat (pork, beef, lamb)	85.6	152.5	78.15
Changes in per capita food consumption (kg)[c]			
Grain	195.46	249.65	27.72
Edible oils	1.6	4.66	191.25
Pork	7.67	12.93	68.58
Beef and lamb	0.75	1.23	64
Portray	0.44	1.35	206.82
Egg	1.97	3.88	96.95
Aquatic products	3.5	4.32	23.43
Changes in rural per capita income (% and yuan)[d]	220	522	137.27
Changes in calories consumed (% and kcal/day)[e]	2,226.9	2,450**	45.5
Changes in rural poverty rate (%)[f]	33%	11%	-22
Changes in rural nonagricultural labor force (10,000)[G]	3149.5	5169.6	47.04

*This figure is for 1988.
** This figure is for 1980.

Sources:

[a.] Chen, Chen, and Yang, 1992, 536.

[b.] State Statistical Bureau, various years.

[c.] Zweig 1997, 14.

[d.] State Statistical Bureau, various years. Cited in Fan, Zhang, and Zhang 2004, 397.

[e.] Wakashiro 1989, 18.

[f.] Fan, Zhang, and Zhang 2004, 396.

[g.] Chen, Chen, and Yang, 1992, 603.

Before the Reform: Collective Agriculture

After the Chinese Communist Party came to power in 1949, it launched a brief program providing land parcels to households for them to manage and cultivate. That program was followed by the creation of production cooperatives, beginning in 1956, followed in 1958 by a dramatic scale-up to communes, averaging 5,000 households and consisting of several production brigades, further divided into production teams of 20–30 households. The commune might include as much as 10,000 acres. Work on private plots was prohibited (Fan and Pardey 1995, 8). Rural land was "owned" jointly by the commune, the production brigade, and the production team, with the production team serving as the basic accounting

unit (Zhang, Li, and Shao 2006, 609). The smallest unit of organization of productive activities was the production team, but most tasks were managed at a higher level, such as the brigade. During this period, the production team had no real power, and it was not uncommon for the team's land to be appropriated for the collective enterprises of the commune or brigade (Ho 2003).

The collectivization of agriculture was expected to benefit from the economies of scale predicted by Marx and also to provide a base for the development of rural industries. It was also intended, suggests Lin (2003, 14), "to serve industrialization by affecting a mandatory drain on rural surplus. Taxation was carried out through the control of basic rural production factors, the monopoly in the circulation of agricultural products and especially price scissors between industrial and agricultural products." He notes that Chinese economists have assessed the total value drained from agriculture through scissor pricing from the 1950s to the 1980s at 600–800 billion yuan.

The impacts on production of collectivization were disappointing. Grain production in China rose during the 1949–52 land-to-the-tiller period by 13.14 percent and continued to increase, if less strongly, during the agricultural cooperatives period (1952–58). But with the Great Leap Forward to communes in 1959, grain production declined. The country suffered serious famine in 1960–63. Grain production recovered by 1968 and continued to increase thereafter, though the amount of land cultivated did not return to 1958 levels. During the 20 years from 1957 to 1978, the annual income per peasant increased from Y87.6 to Y133.6, but the amount of commercial grain contributed by each rural resident declined from 85.05 kilograms to 62.6. Shortages of food supplies spread throughout the country, and coupon food rationing was introduced in urban areas. Rural areas also suffered from food shortages from the early 1960s to 1987. Zhang, Li, and Shao (2006, 614-615) estimate that during the 1970s, one-third of the rural population did not have a stable food supply. Du Runsheng, the Party's Director of Rural Policy from 1978 recently summed up the situation: "Per capita grain production never averaged much more than 300 kilograms. Of the 800 million peasants, 250 million were impoverished. The nation as a whole could not achieve self-sufficiency in grain and required massive imports" (Du 2006, 2).

Collective agriculture ultimately proved incapable of fostering agricultural productivity comparable to that of the "Asian tigers" such as Taiwan and South Korea. Distorted incentives were at the base of the failure. In spite of the system's highly egalitarian aspirations, a work point (*gongfen*) system was introduced in an attempt to create incentives for harder work, but supervision of labor in the brigade proved extremely difficult. Ultimately each worker received the same number of work points each day regardless of the quality or quantity of his labor. With little incentive for individuals to invest their labor, productivity of labor and productivity per land unit declined. Shared tasks without accountability resulted in extensive disguised underemployment (Lin 1988, S200; Lin 1990; Lin 2003, 141). Government tried to deal with these problems by progressively shifting farm management tasks to lower levels within the commune hierarchy. By 1962, the production team had become the basic unit of operation and accounting. Decisions regarding farm operations, including the adoption of new technologies, were primarily made by team leaders (Fan and Pardey 1995, 8).

The Reform Begins: Desperation, Experimentation, Replication

China began to abandon collective production, returning to household farming in the late 1970s. The reform process began with local experimentation in Fengyang County in poverty-ridden Anhui Province, a poor region plagued by flood and famine, driven by famine and the collapse of confidence in collective agriculture.[2]

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The shape taken by the reform was influenced by farmers' memories of household farming, even after two decades of collective agriculture, and their ongoing experience with their small household food plots. Even in the 1960s and 1970s, when the agricultural sector was collectivized, farmers still managed these

[2] See Yang and Su (1998) for an account of the politics of famine and reform in China.

small plots. They accounted for about 6.2 percent of cultivated land (Li, Rozelle, and Huang 2000, 5). The high productivity of these small "food plots" (usually smaller than 0.02 hectares but several times more productive than the collective's land), suggested the potential of a return to small household farms (Zhang, Li, and Shao 2006, 611, 616). In addition, the idea of a return to family farms was not new. Early experimentation with *bao gan dao hu* (contracting everything to the household) went back to the late 1950s. It spread in Henan Province in 1959 and in southwest and northwest areas of China in 1964. These experiments were publicized widely, but were phased out forcefully by government shortly after their introduction (Zhang 1998).[3]

The reform began in 1978 when a few production brigades in Anhui Province secretly distributed their land to their member households to farm. The year's productivity increases were impressive. Some brigades in Anhui that returned to household farming had production increases two-to-five times larger than those in unconverted brigades (Lin 1988, S221, note 8). Local officials embraced the reform, which was then carried out under the protection of Wan Li, the provincial governor of Anhui (Ho 2005, 11). By 1976, Chairman Mao had died and the Cultural Revolution had come to an end. The country was in chaos, and there were grain failures and famine in parts of China. The time was right for the Party to reconsider its options. As late as 1977, a return to household farming was specifically forbidden by the Central Committee of the Party. Because the performance of collective agriculture had been better in the more fertile coastal areas, opposition to reform was considerable in those provinces. Gradually, however, the Party came to accept the idea of contracting land to households. Wan Li was promoted from Anhui to the Politburo, and the Fengyang experiments received support from influential leaders such as Chen Yun and Hu Yaobang. In 1978, the Plenum of the 11th Central Committee of the Communist Party allowed the option of breaking up the communal lands into household holdings (Ho 2005, 11).

At first the Party considered the new system appropriate only for the poor areas of western and central China affected by famine, not the more developed coastal regions. Many considered it a temporary expedient. The formula under which the change was permitted did not refer to "land reform," but rather conferred "five rights" to production teams: the right to select production crops appropriate to local conditions, the right to make rational decisions for management and administration, the right to adopt other measures to increase output, the right to distribute products and cash according to their wishes, and the right to reject improper instructions from administrative agents (Zhang, Li, and Shao 2006, 611).

Sustaining the return to household farming against ideological opposition required skillful manipulation of ideological themes in the service of pragmatism. Du Runsheng was a key figure in this process.[4] Du (2006, 3) describes three key points in the reformers' strategy for winning acceptance of the reform within the Party: (1) build the system initially within the communes, rather than abolishing the communes; (2) allow a number of forms, among which the populace could choose; and (3) allow the reform to spread gradually. In a 1982 speech, Du (1995, 50) provided an ideological basis from the works of Lenin for moving to a smaller scale of production:

> It is also a general rule that large-scale production – whether capitalist or socialist – is superior to the small-farmer economy… But the scale of production cannot be determined just by looking at land size. Lenin once said: "A reduction in farm acreage during the intensification of agriculture very often implies an increase in the scale of production and not a decrease." He also said, "The principal line in the development of capitalist agriculture is changing the economy that is still small-scale in terms of land

[3] Zhang et al. (2006: 611, 616) provides a detailed account of the return to family farming in late 1978 in the village of Xiaogang in Fengyang Country of Anhui Province.

[4] After the Third Plenum of the 11th Central Committee of the Chinese Communist Party (1978), Du Runsheng held the post of Director, Rural Policy of the CCP Central Committee, and Director of the Rural Department, Research Center for Rural Development. He provided leadership in the drafting of the rural-related policy documents for the Central Committee and the State Council, including the decisive "No. 1 Documents" on rural development policy, issued each year for five years (1982–86) by the CCP Central Committee. These documents, which reflect a remarkable blend of ideology and practicality, allowed the HRS reform to keep moving forward before it had fully proven itself and while it was still politically vulnerable.

area into one that is large in terms of scale of production, development of animal husbandry, amount of fertilizer use and degree of mechanization". Clearly the scale of production is not equivalent to the amount of land under cultivation. What matters is the degree of the organic composition of capital[5] and the level of farmland intensity.

The new system spread by voluntary decision of the local collectives.[6] It spread rapidly and not only in the poorer areas (Ho 2005). In January 1980 only 1.02 percent of all production teams in China had changed over to household farming, but by December 1980 the figure was 14.4 percent, then 28.2 percent by July 1981, and 45.1 percent by October 1981. By 1981, when government finally recognized that the HRS reform was broadly applicable, 45 percent of the production teams in China had already been dismantled (Lin 1988, S201; Lin 1992, 36; Lin 2003, 144).[7] By the end of 1983, about 97.7 percent of production teams and 94.2 percent of the farm households in China were farming under the new system (Lin 1988, S222, note 10). The shift was often rapid. Household farming began to appear in Hunan at the end of 1981 and by the end of 1982, 90 percent of the production teams had adopted the system (Lin 1991, 364).

There are few land reforms that can compare with this for rapid implementation of land redistribution. In a few years, collective land was contracted out to more than 160 million households (Ho 2005, 11). Self-implementation by local communities delivered a reform that was incremental and gradual but remarkably rapid.

The Household Responsibility System Reform

The new system of contracting land to the household was known as the Household Responsibility System (HRS). Land continued to be "owned" by the old production brigade under the collective system, but these units began the transition from production organizations to communities.[8] A community's rural land under HRS typically existed in one of four categories: residential land, construction land, responsibility farmland, and household food plots.[9] The reform was focused on responsibility farmland, the collective farmland from the commune period. The reform went through a number of stages in some communities, usually within a few years. Lin (2003, 142–143) describes the stages: (1) an initial phase known as the group work-contract phase, in which the production team was assigned a quota and the whole group was then awarded or punished according to their performance; (2) a second phase called the household output-quota contract phase, in which a specific output quota and plot were assigned to the household, and output exceeding the quota would be given to the household or shared between the household and the production team; and (3) the household responsibility system, identical to the second phase except that there was no unified allocation of income by the production team. Not all communities went through all three stages, and many who did moved through them in successive years.

[5] The term used by Marx for the ratio of "fixed capital," or nonlabor costs of production to total capital, including both fixed capital and labor costs.

[6] Lin (1987) analyzes the reform as farmers' institutional choice, using the model of induced institutional innovation developed by Hayami and Ruttan (1985).

[7] For a discussion of the politics and ideological debates around these changes, see Zweig (1997, 62–67).

[8] Ho (2001) analyses what he describes as the "deliberate institutional ambiguity" involved in the statement that the rural collective owns the land. The "administrative village" (the successor to the brigade) most often did the contracting of land to farm households, and it was often not clear whether it was this administrative village or the "natural village" (the successor to the production team) that owned the land. Inconsistent use of terms such as "farmers' collective," "collective economic organization," and "villagers' committees" in instructions of land confounded cadres responsible for implementing them.

[9] Rural homes were privately owned by households, though the land on which they stood was still owned by the collective. Housing sites were obtained without charge by residents and could not be transacted, though they could be inherited with a house if the heir was a resident of the collective. The house plot and the household food plot have been the most secure tenure niches in rural China, with no term limit. Construction land was land allocated to public facilities and enterprises based on a contract for building. In this case there was considerable variability of terms among the contracts within and among communities, depending on the enterprise and the use.

Under the HRS, the collective farmland was distributed to households to cultivate as "responsibility land,"[10] usually with some services (tractor plowing, irrigation maintenance) being provided by the production teams. It was distributed strictly according to household size, without reference to the size of the labor force. The distribution was highly egalitarian, and as a result the household's holding on the average was fragmented into an average of nine tracts, even though the size of a holding was only about 1.2 acre (Lin 1989, 16). Regulations prohibited sales of use rights, rentals, and use of land as collateral of both privately and collectively managed land (Li, Rozelle, and Huang 2000, 6).

Tenure to users of farmland was provided through contracts from the brigade's executive committee. These were one-to-three-year contracts with households and included an obligation on the part of farmers to produce specific amounts of staple crops (rice, wheat, and some others) for sale to the state at fixed prices (hence the emphasis on "responsibility" in the term Household Responsibility System). Crops produced over these quotas could be sold on the open market, as could crops not covered by quotas. The use contracts could involve relatively modest use charges, could be inherited by resident heirs, and could be subleased but not otherwise transferred. One finds variations among communities, because the contracts were produced locally (there was no national model contract), but this is the broad pattern (Wang 2005).

The highly egalitarian ethos of the villages led to frequent redistribution of the responsibility land (referred to as "adjustments") to ensure equality of holdings as families changed over time. Redistributions were often at the initiative of the collective but also took place to accommodate government projects that needed land. Other factors were in play as well: a desire on the part of government to prevent development of too strong a sense of land proprietorship on the part of farmers, and on the part of collective cadres, a desire to take advantage of the considerable rent-seeking opportunities such redistributions offered (Wang 2005; Rozelle et al. 2005). Land redistribution frequencies varied considerably. Li, Rozelle, and Huang (2000, 6) found that more than 90 percent of the villages in Hubei had readjusted in the past 15 years, but in Sichuan, the percentage with readjustments was only 22 percent.

While security of tenure left something to be desired under the early HRS, the HRS still had manifest advantages. Ling (1991, 148) summarizes them: the flexibility to use family resources to deal with temporary labor shortages, the ability of the family to adjust expenditures, the low management costs of self-management, the production unit being conterminous with the consumption unit, and the fact that the income and living standards of households now depended on themselves and how they managed their farm. The farmers in Ling's study pursued their comparative advantage, reducing areas under grain and shifting to oil-bearing seeds, tobacco, and vegetables and moving into animal husbandry (Ling 1991, 106).

The new household farmers had one important advantage over many land reform beneficiaries, which often found their input supply and marketing chains badly disrupted or still controlled by former landlords. The beneficiaries of the HRS reform had a guaranteed market for a quota amount of their major crops at state-set prices and the opportunity to sell their over-quota production and nonquota products to the state at market prices.

A Parallel Reform: The State Procurement System

The sad state of Chinese agriculture in 1977 led government to introduce a significant reform of the system of state procurement of agricultural products and procurement prices at the same time that the

[10] Li, Rozelle, and Huang (2000) indicate that at the outset of the reform, local leaders allocated the collective land to peasants in three tenure types: ration land (*kouliang tian*), to meet household subsistence requirements, responsibility land (*zeren tian*), given on the condition that farmers deliver a low-price grain or cotton quota to the state, and contract land (*chengbao tian*), auctioned off by village leaders for a fee. Not all villages had all three categories of land, and land tenure types differ sharply among the villages: while all villages had responsibility land, a minority had contract land and less than 20 percent had ration land.

HRS reform was getting underway. This was in fact the primary government response to the food crisis. The HRS was a more spontaneous development later embraced by government.

In 1977, government was the only legal purchaser of many key commodities, including rice, wheat, maize, oilseeds, and cotton. Provinces were assigned quotas by central government and these were broken down geographically, so that production teams, at the base of the pyramid within the communes, were assigned quotas. Quota production had to be marketed to the state at prices set by the state. With the division of communes into household farms, these quotas became the responsibility of households, assigned by the same contract that allocated them their farmland. The state was in these years effectively a monopoly purchaser of quota production, of grain and key agricultural products produced in excess of quotas, and often even of nonquota crop production.

After 1977, the state procurement prices were raised to increase farmers' incentives. In 1979 alone, state procurement prices for major crops, on average, were increased 22.1 percent. The government also began to increase grain imports and loosened restrictions on private interregional trade in agricultural products (Lin 1992, 34, 39). Government purchasing prices rose greatly in the years after 1979, those for grain by 100 percent and those for many other crops by 40–50 percent, with free market prices still higher (Ling 1991, 106). Huang (1998, 57) provides procurement prices for 1952–90 (Figure 1).

Figure 1. State and market prices of grain, 1952–90

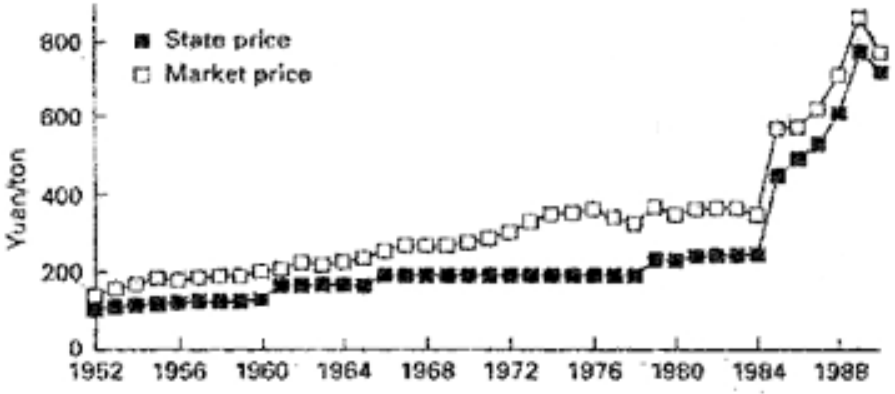

Fig. 4.1. State and market prices for grain, 1952 to 1990. Rural retail prices are only proxies. Grains are measured by tradable units (*Maoyi Liang*) and all prices are mixed average prices.

Source: Huang 1998, 57.

At the same time, the state introduced important reforms in the state procurement system. From 1977 onward, farmers were allowed to trade grain on free markets once they fulfilled their delivery quotas to the state procurement system. Bans that prohibited peasants from growing cash crops were terminated. Farmers regained the right to grow vegetables or other nonquota cash crops and to sell their products in the open markets. Trade in urban areas was still restricted in the initial stage, however, and most markets were still substantially controlled by the government (Jia and Fock 2007, 2).

Since 1988, a series of reforms have sought to further change the incentive structures of grain production, consumption, and exchange. To enhance farmers' incentives to undertake grain production and exchange, either the state purchase price has been raised or the quantity purchased at the lower state price has been reduced, depending on the measures adopted in the marketing reforms (Kung 1992, 165–166). To secure low consumption prices in favor of urban areas and industry, the domestic grain market was rationed. The state raised grain prices a number of times after 1979. Grain rationing was abolished in the early 1990s, but the government remained intent on keeping grain prices low and supply stable for urban areas.

Control on retail prices in urban areas was retained, keeping urban food cheap (Ling 1991, 112). Consequently, as pricing of agricultural production was liberalized, the fiscal burden on government rose substantially. Subsidies by the state for food consumption by the urban population increased substantially to Y27.5 billion per year in 1985, or a fourth of the wage bill of all state employees (Lin 1989). Du (2006, 9–10) attributes the problems in the years after 1986 to government increasing the grain purchase price without correspondingly raising the price at which it would be sold to city people: "Thus the more grain production increased, the greater the financial subsidy, and massive increases of grain bought at higher prices created a burden too heavy for the state finances to bear…"

Grain prices fell sharply during the good harvests, such as occurred in 1991 and 1992, and after a glut of grain in 1983/84, government in 1985 cancelled the policy of paying 50 percent more for the grain procured beyond the contract amount and instead purchased all grain at an increased average price (Oi 1999, 619). In the years after 1985, the major variable in determining incomes became marketing, as government switched back and forth on key policies in an attempt to balance rural incomes and urban food prices. There was an attempt in the early 1990s to raise state procurement prices to market level and to dismantle the parastatal marketing system (Jia and Fock 2007, 2). However, food prices rose sharply and the state compulsory quota system was again re-imposed for most parts of China in 1995 but at a lower procurement level (Huang, Bi, and Rozelle 2004).

The manner in which this procurement and market reforms were managed is one of the distinctive features of the Chinese rural reforms of the 1980s. Whereas most post-Communist countries have gone the "big bang" route, with a sudden transition to market prices for agricultural production, China opted for a two-track approach, maintaining quotas and set prices for quota production while liberalizing markets for nonquota production and allowing markets to control prices for above-quota production of quota crops. Chinese and other commentators have suggested that the dual-track approach achieved efficiency without creating losers, continuing to enforce the existing plan while simultaneously liberalizing the market as a method of making implicit lump-sum transfers to compensate potential losers of the reform (Lau, Qian, and Roland 2000).

To Lin (2003, 332–333), it is this "crossing the chasm" between state prices and the market "in two steps" that constitutes the genius of China's agricultural pricing reforms. The approach, he urges, provided the state with an assurance of sustained grain production and farmers with an assurance of a predictable if modest farm income during a period of great uncertainty. At the same time, it provided strong incentives for farmers to (1) exceed quotas and so to be able to market above-quota production freely, and (2) to diversify into nonquota crops. Zhang (1998, 165) emphasizes the role that experimentation played in the reform and what he calls "institutional learning" through experimentation. Regarding the pricing reforms, he notes that under the two-tier price system "… government was able to control certain agricultural products, ensuring stability of supply, while some products were allowed to enter the markets. This allowed market mechanisms to develop and consumers and producers to adapt gradually to a market environment."

A Parallel Development: Rural Industrialization

With the transition to household farming, it became evident that substantial disguised surplus labor had existed in collective agriculture. In 1985, the main foodgrain crops required fewer labor days per hectare than in 1978—down 22 percent for rice, 48 percent for corn, and 53 percent for wheat (Vermeer 1989, 85). The labor freed up had to find other local employment. Those thrown off by agriculture could not migrate elsewhere to work because of the *hukou* permit system, a remarkably effective system of strict residence control, which kept labor in their existing rural and urban areas (Zhang, Li, and Shao 2006, 620).

The solution to the problem of rural labor surplus was rural industrialization, reflected in the slogan "Leave the farm but not the village, move to the factory but not the city." The rapid development of the agricultural sector under the HRS reforms created not only a labor surplus but also a surplus of funds for local enterprise development (Lin 2003, 311). Township and village governments inherited the

collective factories upon the break-up of the communes, and they seized on the opportunity presented by cheap, local labor. Rural industrialization was only later embraced by government as policy (Pei 2005). The TVEs became the success story of Chinese development in the 1990s. As with the HRS, the TVEs were not the brainchild of planners but a spontaneous reaction to market opportunities by local governments. They were public but autonomous, and their production and other decisions were market-driven.

The rapid launch of rural industries was facilitated by continued collective ownership of land by the successors to the communes (Pei 2005). In 1978, the TVE gross output value was just 7.2 percent of China's total output value. In the 1980s, rural industry became the leading force behind rural economic development, with 60–70 percent of rural output value produced by township and village enterprises (Lin 2003, 147, 311). Zweig (1997, 258) shows the dramatic growth, with the number of firms increasing from 1.5 million in 1978 to 17.5 million in 1987 to nearly 25 million in 1994, while the number of employees increased by a factor of 4.5 and total output value by a factor of 80. Table 2 provides more detailed data on the development of TVEs between 1978 and 1994. By 1996, China's rural enterprises employed more than 135 million people, about one-third of the rural labor force. These laborers came from the labor released by the de-collectivization of agriculture, and yet agricultural production continued to grow (Oi 1999, 620).

Table 2. Township and village enterprises, 1978–94

Year	No. of firms (1,000s)	No. of employees (1,000s)	Total output (100 million RME)
1978	1,524.2	28,265.6	493.07
1979	1,480.4	29,093.4	548.41
1980	1,424.6	29,996.7	656.9
1981	1,337.5	29,695.6	745.3
1982	1,361.7	31,129.1	853.08
1983	1,346.4	3,2346.4	1,016.83
1984	6,065.2	5,2081.1	1,709.89
1985	12,224.5	69,790.3	2,728.4
1986	15,153.0	79,371.4	3,540.9
1987	17,502.4	88,051.8	4,764.3
1988	18,881.6	95,454.5	6,495.7
1989	18,686.3	93,667.8	7,428.4
1990	18,504.0	92,647.5	8,461.6
1991	19,078.8	96,091.1	11,621.7
1992	20,792.0	105,811.0	17,975.4
1993	24,529.0	123,453.0	31,540.7
1994	24,945.0	120,175.0	42,588.5

Sources: Zweig 1997, 258. Number of firms and employees, and the total output value come from the State Statistical Bureau 1995.

During the 1980s and early 1990s, this expansion of employment in the TVEs was much more rapid than that in the state industrial sector. Some of the TVEs were poorly located and, as markets became more open, a process of consolidation took place. By the mid-1990s, local governments had begun privatizing the TVEs. With the support of the center, they shifted preferential treatment to private firms. By the end of 1997, about a third of all collectively owned rural enterprises had been privatized, the largest number turned into shareholding companies. Local authorities could afford to shift their support

because private firms were finally becoming a viable alternative source of tax revenue (Zhang 1999; Oi 1999, 624).

The impact of the HRS, which was extended through the TVEs post-1985, may prove to be more important than the direct effects felt during 1978-84. Lin (2003, 312) notes that TVE development, sparked by the HRS reform, has driven subsequent reforms: "TVE development was a market driven process, and greatly pushed the economic reform toward a market economy, corrected the distorted industrial structure, and became part of a dual track system in areas of both resource allocation and price formation which placed the traditional system under growing pressure."

Rural industrialization and the new prosperity did, however, have a downside for the agricultural sector. Land in cultivation declined in the post-reform years, especially in the coastal provinces where fertile soils are located. According to Du, Tang, and Zhang (2002), about 30 percent of the diminished cultivated land in those areas was occupied by collective-owned industries and 20 percent was used for peasants' dwellings.

The Property Rights Reform

The initial impact of the reforms seems to have played out by the end of the 1980s. Fan, Zhang, and Zhang (2004, 397) explain that during 1985–89, rural income continued to increase but at the much slower pace of 3 percent per year. Rural residents earned less than half of what their urban cohorts earned in 1978; rural income was 42 percent of that in urban areas. Due to the success of rural reforms, that percentage increased to 59 percent in 1984. However, it declined again to 36 percent in 2000, owing mostly to fast growth in urban areas, state manipulation of rural–urban terms of trade, and relatively sluggish increases in rural earnings. Rising inequality of rural incomes was apparent after 1995, with absolute incomes even falling at the bottom end of the income distribution. Benjamin, Brandt, and Giles (2005) attribute most of this decline in welfare to lower agricultural incomes brought about by lower farm prices (cited in Fan, Zhang, and Zhang 2004, 25–27). Agricultural production ceased to grow so rapidly and urban incomes grew faster than those in rural areas, leading to an ever-widening gap between urban and rural incomes.

The impacts of the HRS had been so remarkable that the ideological lobby for recollectivization had become muted, but old ideas about economies of scale (big is good) persisted. Many Chinese experts, including Zhang (1998), attributed lack of greater investment in agriculture to the egalitarian land distribution, arguing that it prevented the development of larger farms which could take advantage of economies of scale. In the late 1980s, the continuing outflow of labor from agriculture, most pronounced in the coastal provinces, engendered a number of experiments with administratively managed "scaling-up," that permitted some large operating units to allow for more effective deployment of mechanization. The scale experiments involved larger farms managed on contract by private farmers, village cooperatives, or other enterprise forms. Most reviews of their performance suggest that they were highly subsidized but not more efficient than smallholder agriculture.[11] Experimentation with such arrangements continues, and spontaneous local solutions make it increasingly difficult to generalize about land tenure arrangements in Chinese villages. Zhang (1998) reviews a number of ongoing experiments, including (1) the "two-field" system, which allocates a subsistence plot to each household and market production plots only to those who wish to farm them and to pay for access to them, and (2) the wasteland contracting system, in which those who contract to develop wasteland receive very long-term use rights, which are fully transferable and mortgageable (see also Hanstead and Ping 1997). The decentralization of land

[11] Bruce and Harrell (1989) skeptically reviewed scale production experiments in Wuxi, Wu, and Changshu counties of Southern Jiangsu Province; in Shunyi County near Beijing; and in Nanhai County of Guangdong Province. The selection of the "scale farmers" by the collective often had little to do with managerial ability. Prosterman, Hanstad, and Ping (1998) and Prosterman and Bledsoe (2000) also review scale operations critically, noting that the international experience has demonstrated that there are few economies of scale in agricultural production (as opposed to primary processing and marketing). They found that scale operations in Jiangsu and Zhejiang Provinces were producing at about the same level as smallholders, in spite of extensive subsidies, and were equally unconvinced by the scaling-up approach (shareholder systems) practiced in Nanhai.

administration allows a considerable variety of arrangements within the framework of collective ownership.

Alongside the scale debate, another policy debate has gone on over how and when farmers' land rights should be strengthened. The initial HRS contract was annual, and terms could be extended. At the same time, however, the debate focused on periodic reallocations of land among farm households, and their disincentive effects on investments in land. Such reallocations could override the terms of contracts with farmers. Reallocations involved high transaction costs. During the land redistribution in Wugone Country after the summer harvest of 1989, 10,000 labor units (persons) per day were set to measuring and dividing farmland for one month, at a cost of roughly Y800,000 (Ling and Jiang 1993, 457). The relative merits of market or administrative allocation of land are contested ground among researchers (Carter and Yao 2005).

The actual frequency of such reallocations is also contested. A sample survey from the Research Center for Rural Development (RCRD) in 1988 showed that 65 percent of 250 sample villages nationwide had redistributed land every two years since 1983. The distribution in 91 percent of those villages was caused by demographic changes, while only 5 percent reallocated land in order to enable farm size to grow, and less than 2 percent did it for plot consolidation (Ling and Jiang 1993, 447). A 2001 survey conducted under the auspices of RCRD over 1,600 households in 17 provinces found that four-fifths of the villages had conducted at least one land readjustment since the first allocation after the HRS was instituted. In the great majority of villages that had conducted at least one land readjustment, the most recent adjustment had occurred within the past five years (DRC and RDI 2002, 22).

The Development Research Center (DRC) and Rural Development Institute (RDI) study (2002, 24–30) found a broad awareness that government favored a reduction in the frequency of such reallocations (94.1 percent), and those supporting that policy outnumbered opponents 5:1. However, when asked about a complete prohibition of readjustments, a slight majority opposed a complete prohibition. Interestingly, those whose villages had never had a readjustment more strongly supported prohibition of readjustments. They found that more than a third of the contracts and certificates issued to those farmers had provisions allowing land readjustments even during the term of long-term contracts. Asked if readjustments would continue, 45.8 percent of respondents expected them to continue, whereas only 12.2 percent felt they would definitely not continue. Reforms to enhance property rights have also been the subject of policy experiments, notably in Meitan Country, Guizhou Province.[12]

These national policy discussions of scale, reallocations, and property rights have led to further reforms, but through a very gradual process of legal change. Now, for the first time, Chinese commentators on land reform have begun to use the language of property rights, rather than responsibilities, having clearly entered the domain of tenure reform. The process of incremental land law reform that has taken place is described briefly below, without doing justice to its complexity. The uneven implementation of specific tenure reform initiatives makes it difficult both to generalize about the situation on the ground and to assess confidently the tenure reform's impacts.

At the outset, there was no law regarding the HRS, and reforms came through a series of rapidly evolving party pronouncements and instructions. This was not unusual in China during that period. China strongly exhibited the Marxist contempt for law as a tool of oppression in the hands of the bourgeois state. It conveyed less of a sense that law could also be a tool for change than, for instance, Russian communism. After flirting briefly with more formal legal modes early on, Mao in 1959 dramatically downgraded the role of law and law professionals in Chinese society (Peerenboom 2003, 43–45). The approach to normative innovation was ad hoc experimentation, tweaked through a succession of party edicts. A basis in law for the new institution would only be provided once the new model had proved itself. In China, a new law was not associated with innovation but was seen as evidence that a new arrangement had succeeded and was to be enshrined in law. Du (2006, 5) explains

[12] The Meitan experiment, elements of which were later widely replicated in Guizhou Province, involved an end to reallocations, strengthened use rights, increased marketability (and even mortgageability) of those rights. It is discussed in Bruce and Harrell (1989) and at a later stage by Zhou (1994).

As recognized by institutional economics, forming a stable system must be a process in which the populace chooses for itself. This process included different sides in mutual dialogue that leads to coordination and integration, according to the requirements of the interest and political pursuits of each side. Given that the Party wanted to give the populace a free choice, we did not need to turn this practice into a law of the state for the time being. We had to treat law as an outcome of a social choice and eventually provide legal guarantees in the form of law.

The basic land administration arrangements in the wake of the HRS were first set out in law as the Land Administration Law of 1987 a decade after the reform began. A number of important reforms in the HRS were being urged by central government by this time. Rural Work Document No. 1 of 1984 urged local officials to extend the duration of farmland contracts to 15 years and for longer periods for special uses such as reforestation and fruit tree plantations. The Politburo's No. 5 Document of January 1987 ("Deepening the Rural Reforms") encouraged farmers who had moved into nonagricultural employment to transfer their use rights to others. To this end, the Constitution's prohibition of all transactions in rural land (Article 10) was amended by the National People's Congress on April 12, 1988 (Bruce and Harrell 1989).

The provisions of the new 1987 Land Administration Law reaffirm collective ownership of rural land (Article 8) and allocation to households for use under contracts (Article 12). It does not include some of the tenure-strengthening measures recommended in Party pronouncements, which were permissive rather than mandatory. Local cadres could, and often did, ignore them. During the author's field work in Fujian in the mid-1990s, he realized that while some responsibility contracts were being made for longer periods, they still contained clauses providing for reallocations at the discretion of the collective, nullifying the greater security of tenure provided to farmers by the longer terms (Bruce and Muo 1988).

Amendments to the original Land Administration Law, the most recent in 1999, provide for issuance of certification and registration of land rights of rural collectives and of user rights over rural land for nonagricultural purposes. They require registration of changes in ownership and use of land and buildings. They also provide for administrative settlement of land disputes, overall land use planning, and the establishment of a land survey system and a land statistics system. Most important, the 1999 amendments *require* a minimum term of 30 years for farmland. Longer terms, up to 70 years, are available for specialized uses such as forestry or agroforestry on hillside lands and for some construction projects.

The provisions of the Land Administration Law on contracting of farmland remained sketchy. In 2002, after several years of intensive debate in Party circles, a full legal framework for the HRS was provided. The Rural Land Contracting Law became effective on March 1, 2003. It does not replace the Land Administration Law, but supplements it. The law confirms a number of administrative orders that had strengthened the use rights of rural land users. Now land use contracts must be for 30 years for arable land, 30–50 years for grassland, and 30–70 years for forest land. They must be in writing and signed by both parties. Readjustments are restricted. Land is not to be readjusted (redistributed by the collective) during the contact term, except if this is required by a natural disaster and or unspecified "other special circumstances." Any readjustment during the term of the contract must be approved by two-thirds of the members of the village assembly or two-thirds of the village representatives. The village may maintain a part of its land in a flexible reserve to adjust landholdings for newly added village population, and it may also use reclaimed land and land returned voluntarily by contracting parties for this purpose. The contacted land use rights are now clearly inheritable during their terms, an important change.

The township government is responsible for rural land contracting and contract management within its administrative jurisdiction and often provides the needed forms and instructions. The contracts are effective when concluded but are required to be registered. The county or higher level of government is required to issue to a user a land contracting and operation certificate and to register the contract. The Ministry of Agriculture keeps these registries. Fees are not to be collected beyond what is necessary to cover the cost of the certificate.

While the collective cannot normally take back the land during the contract term, the rapid growth of urbanization and its impacts are recognized. When land users move to a small township, they

can retain their use rights, but if they move to a city and change their household registrations to nonagricultural, they must surrender the contacted land. In that case compensation is to be paid for investments on the contracted land. The Rural Land Contracting Law confirms the right of the holder to transfer (assign), lease, exchange, or otherwise engage in transactions regarding the use right. For assignments and exchanges, the permission of the collective must be sought, but for other transactions the collective must only be notified. The transaction must be made in writing if it is for more than a year, and it must be registered. If it is not registered, the rights are subject to the good faith claims of a third party.

A collective may contract rural land to a unit or individual outside the collective but only with the approval of two-thirds of the village assembly or two-thirds of the village representatives as well as the approval of the township government. Provision is made by the Rural Land Contracting Law for mediation and arbitration of disputes concerning contracts and for ultimate recourse to the courts, as well as for civil and criminal liability for officials and others who violate the procedures required by the Law or the rights of land users under the Law. The new law went into effect on March 1, 2003.

Studies suggest that implementation of the reforms under the 1999 Land Administration Law and the 2003 Rural Land Contracting Law has been very uneven (Prosterman, Schwartzwalder, and Jianping 2000; Prosterman, Ping, and Zhu 2004). They have stressed that while rural land has long remained outside the market economy, land use rights in urban land, which is owned by the state rather than the collective, has long been readily marketable. Assets in the form of long-term use rights to urban land have become an important element in the major wealth differential between urban and rural households. This dichotomy introduces major distortions into China's land economy, a matter discussed in the section below on unfinished business. Advocates of stronger rural land rights have continued to assert the need for greater security and marketability of rights in farmlands, to allow them to gradually achieve a market-determined value, thereby eliminating the strong duality that now exists between rights in rural and urban land.[13] In 2007, China launched a comprehensive new Property Law, a first and modest step toward unifying rural and urban land tenure.

At the close of the Fifth Session of the Tenth National People's Congress on March 16, 2007, the Congress approved the new Property Law, which took effect on October 1, 2007. It is more important for its content on urban land than on rural land. Regarding collective agricultural land, it largely refers to the 2003 Rural Land Contracting Law. It does, however, provide an important clarification of the nature of collective ownership and some other matters, summarized in Zhu et al. (2007, 12–13) and Development Research Center and World Bank (2007, 6–7):

- *Collective land is owned not by the local collective institutions, but is "collectively owned by members of such collectives."* This makes it clear that members have a property interest in that ownership, and the language of the Law suggests that compensation should go directly into the hands of affected farmers because they are part owners of the property right taken away by the state. In the past, compensation went primarily to the collective.
- *Farmers' 30-year land rights are for the first time characterized as property rights* (as opposed to their contractual rights). This should in theory at least make it more difficult to take away farmers' land rights.
- *National standards now exist for real property registration.* The Law requires that the establishment, change, transfer, or termination of real property rights be registered to have legal effect, unless otherwise provided by law. Regulations are to be separately promulgated to govern the registration process and specify the authorities that will be responsible for handling registrations. China now has 250 million farm households, with each household

[13] Wang (2005) and Prosterman , Ping, and Zhu (2006) both are excellent and relatively up-to-date summaries of the legal and regulatory framework for land, but both were prepared during discussions leading up to the enactment of the new Property Law, which was still in draft form at the time, and so are not the final word. Wang (2005, 82), commenting on the draft property law, worries that "the transitional process" of land tenure reform will be "frozen in time or halted through legislation."

having on average five plots, so nationwide land registration and certification will be a challenge.[14]

- *Farmers have modestly improved prospects for extended duration of their land rights,* as the Law provides in Article 126, which says that "contracting farmers should continue extending the contract according to relevant law." This is not as strong as the wording used for urban land use rights, which speaks of automatic renewal (Article149), but it is still the first time Chinese law has expressed a presumption in this regard in relation to the 30-year term. Article 130 affirms the limitations on readjustments in the Rural Land Contracting Law, but breaks no new ground in this regard.
- *Compensation criteria for rural lands now include a requirement that compensation arrangements must protect farmers' livelihoods.* While the specific criteria from early law and policy pronouncements remain unchanged from the multipliers of average annual crop yields under the Land Management Law, Article 42 of the Property Law specifies that "…social security benefits [should] be arranged for affected farmers so that their livelihood and rights be protected." This is a positive development and could open the way for payment of compensation in excess of the Land Management Law standards, but the requirement is vague and could be easily evaded by officials.

Reformers were in some ways disappointed by the new Property Law. It does not allow rural land rights to be used as collateral for loans. Rather than incorporating important new reinforcement of the property rights of rural landowners, it tends to consolidate progress already made.[15] Provisions allowing mortgaging of rural land appeared in earlier drafts, but they were dropped in the final version. Some commentators have noted that mortgaging of rural land is not prohibited. Similarly, the Law does not directly address the marketability of rural construction land, including housing plots. Again, such transactions are not expressly prohibited. These failures to specify reforms leaves the door open for their promulgation by party edict at a later date. And it is worth noting that the structure of the law itself provides an indication of the reform direction of the future. Instead of having separate sections on urban and rural land, it provides rules by type of use right (farmland, construction land, and so forth) and makes distinctions within those categories if considered necessary. This seems to suggest an intention to unify the systems in the future.

The future direction of land law reform in China is suggested by a recent policy document referred to as the October 2008 CPC Central Committee Decisions. This is a broad policy document aimed at a more balanced and integrated rural-urban development. It sets a goal of doubling rural per capita incomes by 2020 and includes several major decisions on rural reform and development, with a new land policy at its core. Under the new policy, the "existing land contracting relationship shall remain stable and unchanged for a long time." The precise meaning of this statement remains under debate. In a recent magazine interview (*Caijun*, December 12, 2008), Chen Xiwen (Director of the Central Government Leading Group of Rural Affairs Office) urged that "The only option is to implement no

[14] Government had already launched a registration pilot with FAO support nearly two years earlier (Project TOP/CPR/30088, "Rural Land Registration and Certification Pilot," begun in 2005). The project is led by the Central Government Leading Group of Rural Affairs Office, with participation by the Ministry of Agriculture, the Ministry of Land and Resources, and the State Council's Legislative Office. The sites selected are two villages in Feidong County of Anhui Province. Significant inconsistencies among the land contracts on record are said to have been a major challenge. A draft strategy document recommends moving next to further pilots at different locations and in different economic environments, including urban pilots (FAO 2009).

[15] A cautious assessment in a Development Research Center and World Bank report (2007, 1) says that "[The] Property Law is unmistakably an advance, it is just as clearly part of an evolutionary process. Indeed, as will be shown, the power of the Property Law lies not in that it represents a sudden departure from what has come before, but in the fact that it builds upon and consolidates successive policy instruments and legal reforms that have taken root over the last three decades. And by the same token, the Property Law is not the end of a journey – as this paper will explore, multiple challenges remain to ensure that land policy and its implementation fully supports China's development objectives."

readjustment in response to change in household size, and cut off the link between household size change and change in household landholdings. All household land rights acquired through the Rural Land Contracting Law should not be readjusted in the future." Others in government are less open to a perpetual land use right, which they feel would reduce state and collective ownership to a legal technicality, much like the residual interest of the Crown in privately owned land in English Law.

The Decisions go on to state that "…farmers shall be allowed to transfer, lease, exchange, assign or join as stock shares land contracting and operation rights legally, voluntarily and in return for adequate payment and develop multiple forms of proper scale farming." This is a strong affirmation of the transferability of rural farmland, though mortgaging is still excluded. This seems to suggest that a decision has been made to rely on market forces to accomplish any scaling-up of farm sizes that may be needed as labor continues to move out of agriculture.

Finally, and most important, market transactions for commercial purposes in collectively owned construction land will now be allowed. This is the most important reform item in this package. It is not entirely clear whether it applies to farmers' residential land, but it is nonetheless a first crack at the state monopoly of the market in land for commercial uses. This reform has major implications for land requisitioning and compensation for requisitioned land, since this land and the improvements upon it will now have a market value. The Decisions say explicitly that the ultimate objective is a unified market in construction land, whether it is state or collectively owned.

The October 2008 Decisions, together with the Property Law passed in March 2007, reflect China's intention to gradually narrow the gap between land tenure in the rural and urban sectors. The reforms will eventually require amendments to the Land Administration Law and the Rural Land Contracting Law. Implementation is some years away, though in some provinces, such as Guangdong, pilots for the sale of collective construction land are already underway with administrative approval. China is moving gradually, sector by sector and use by use, into an era of greater transferability of rural land use rights. Ultimately, it seems clear to the authors, an integration of urban and rural land markets is intended. This would allow China's rural people to benefit from the appreciating value of their land, as do urban landholders.

3. LAND REFORM IMPACTS

The impacts of the first land reform, the HRS reform, have been carefully studied and analyzed. A remarkable degree of consensus exists regarding both the positive impacts of the reform and the major role it played in initiating broader rural reforms. Those studies focus on the key years 1978–84. In the case of the second land reform, the property rights reforms, the situation is quite different. Control of farm households over their land has increased gradually, in many small steps, and implementation has been halting. It remains partial. Factions in the central government have differing visions of the appropriate rate of implementation, and local officials, who have vested interests in their control over land allocation, have often stalled changes. The Chinese court system, while it is improving, is not yet a reliable tool for enforcing rights against officials. Most of the econometric studies are thus tentative. However, some unanticipated results have emerged that deserve consideration.

HRS Reform Impacts

A number of indicators have been used to assess the impact of the HRS reforms. These include investment in farms, farm productivity, farm income, and, to a lesser extent, food availability and nutrition. Reforms often involve a cocktail of reform measures, and a major challenge in assessing their effects is disentangling the relative importance of the results achieved by the different measures. Fortunately, there are some excellent studies of impacts for the critical years 1977–84, during and immediately after implementation of the reforms, before the waters became muddied by many other changes.

Investment Impacts

Public investment in agriculture was substantial under the commune system. Was this public investment continued after the HRS reforms, and to what extent was it supplemented by private investments of the new household farmers?

From 1979, when the HRS had begun to spread rapidly, the government's investment in agriculture declined from Y6.24 billion, reaching Y3.43 billion in 1983, then partially recovered to Y4.68 billion in 1987. Meanwhile the collectives' investment decreased from Y8.71 billion in 1979 to Y2.07 billion in 1985. These declines were however offset by per household investment of Y34.49 in 1981, increasing to Y100.13 in 1983, and remaining at an annual level of Y80–100 thereafter. Between 1983 and 1984, annual household investments averaged Y18.10 billion, more than twice the annual combined state and collective investments during the same period and more than the annual combined state and collective investments before the reforms (Feder et al. 1992, 2).

Cumulatively while farmer investments in agriculture were substantial, they were dwarfed by farmer investments in residential construction. Housing investment was 85 percent of farmers' total investment in 1982, remaining high throughout the 1980s and still reaching 70 percent in 1992. Feder et al (1992, 13) find that the ratio of housing investment to productive investment in the counties they studied ranged from 2.71 to 10.88 during the period 1983/84–1987/88. This rush to invest in housing reflects the insecurity of tenure on productive land, which was subject to periodic land reallocations, compared with the more secure tenure on residential land. Farmer investments in land were for the most part not investments in land itself, but in capital stocks such as farm equipment and livestock (Feder et al. 1992, 13).[16]

Was investment by the new HRS landholders credit-constrained? Feder et al (1989, 525) indicate that institutional and informal credit hardly existed in the 1978–84 period. It is now common, but their

[16] Investments in capital stocks (livestock and equipment) more than doubled in the five-year period covered by the study (1983/84–1987/88), with average annual capital growth of 15 percent over the period covered. Fewer than 10 percent of households owned tractors, but a large number of households invested in livestock for food (pigs and poultry) and draft power and even boats in one site with extensive canal networks (Feder et al. 1992, 11).

study found very few instances of the medium- or long-term credit usually required for land improvements. Long- and medium-term credit was and is a constraint, they suggest, and they indicate that most funds for investment in land are generated by off-farm income of the farm household and relatives.

Public investment continues to be important. Neglect of facilities was a concern of those who analyzed the HRS reforms early on (Bruce and Harrell 1989). Irrigation is the life blood of Chinese agriculture, and major irrigation works remained a public responsibility. In any event, the transfer of management of these facilities to new institutions seems to have gone more smoothly than might have been anticipated. The later literature does not note any significant problems. The ability of government to maintain these services to the beneficiaries of the HRS reforms in part accounts for the impressive growth and poverty reduction delivered by the reforms.

Production Impacts

Research on the effects of the HRS has focused primarily on its impact on productivity, and especially on teasing out the relative importance of institutional reforms, pricing reforms, technological change, and public investment in achieving the major productivity gains achieved in the years 1978–90.[17]

Lin (1988, 1989) found in his analysis of provincial-level panel data a 42.2 percent output growth in the cropping sector in 1978–84. Between 1978 and 1984, the key years for HRS implementation, the annual growth rates for the three most important crops, grain, cotton, and oil-bearing crops, averaged respectively 4.8, 17.7, and 13.8 percent. This compared favorably with the average growth rates of 2.4, 1.0, and 0.8 percent per year, respectively, for those crops in the preceding 26 years, 1952–78. Zhang, Li, and Shao (2006) estimate grain area output per unit under the HRS to be nearly 25 percent higher than that under collective farming. They also find that national grain output rose about 300 million tons in 1978 and increased to 407 million tons in 1984. As Zweig (1997, 75) points out, this explains why grain output could rise even while the acreage under grain decreased. In Table 3, Zweig provides 1978–84 production rates of various quota and nonquota crops and other agricultural products:

Table 3. Indicators of rural development, 1978–84 (in 100,000 tons)

	1978	1979	1980	1981	1982	1983	1984
Grain output	3,047.5	3,321.2	3,205.6	3,250.2	3,534.2	3,872.8	4,070
Cotton output	21.7	22.1	27.1	29.7	36.0	46.4	62.5[a]
Oil-bearing crops	52.2	64.4	76.9	102.1	118.2	105.5	118.5
Tea output	2.7	2.8	3.0	3.4	4.0	4.0	4.1
Sugarcane	211.2	215.1	228.1	296.7	368.8	311.4	396.6
Meat production (pork, beef, lamb)	85.6	106.2	120.6	126.1	135.1	140.2	152.5

Sources: 1978-81: Zweig 1997, 75; 1982: State Statistical Bureau 1982; 1983: Beijing Review, no. 35 (August 27, 1984); and State Statistical Bureau Communique, April 29, 1984; 1984: USDA 1985.

[a.] Ministry of Agriculture 1985.

During 1984–88, grain output declined only slightly, but per unit area of output improved. The national grain output increased to 505 million tons in 1996 and reached a high of 512 million tons in 1998. In Henan, where the HRS was implemented in early 1983, per mu yields of all three key products

[17] The analysis here looks at the contracted responsibility land as a whole, but there were important subcategories, in particular hillside land. This land, often neglected and denuded in the collective period, has been developed aggressively under agroforestry and tree farming, since the advent of the HRS. Initial allocations of forest land to households on the same model as farmland unfortunately resulted in deforestation through unsustainable cutting. Later, the emphasis shifted to re-afforestation under long-term contracts, with an emphasis on agroforestry. This has been far more successful and is an important environmental success of the HRS reform. See Bruce, Rudrappa, and Li (1995) and Zhang and Kant (2005).

rose suddenly in that year, by 25.3 percent for grain, 89.3 percent for cotton, and 35.7 percent for oil-bearing seeds (Ling 1991, 104).

Early studies ask to what extent these impressive output increases were due to the institutional reforms under the HRS and how much they owe to the state price increases during the same period. Lin (1992, 46–47) finds that output growth during 1978–84 was 42.2 percent. He concludes that 45.8 percent of this output growth came from increases in inputs, the most important being increases in fertilizer applications, which alone accounted for about one-third of the output growth. The HRS reform accounted for 48.6 percent of output growth, as much as the combined effects of the various input increases. Changes in market prices and state procurement prices did not affect productivity, but they did contribute nearly16.0 percent of output growth, probably through input use, cropping intension, or crop mix. This is roughly in line with the two other serious econometric analyses. MacMillan, Whalley, and Jing (1989) found that of the total farm productivity increase in 1978–84, 41 percent of the increase in the cropping and animal husbandry sector could be attributed to total factor productivity growth; of that, 78 percent was attributable to the farm institutional reform (HRS) and 22 percent to price increases. Wen (1989) found that farm output increased by 56 percent due to the institution of the household-based farming system. Zhang, Li, and Shao (2006) reach similar conclusions.

However, Fan (1991) raises an interesting question about the relative contribution of technological change to the production growth in Chinese agriculture. Huang and Rozelle (1996) explore this issue with respect to rice. They suggest that technology adoption (adoption of hybrids and the move to double cropping) was the most important determinant of *yield* growth during 1978–84, accounting for nearly 40 percent of the change. They find that 35.6 percent of the rice yield improvements were due to the HRS (Huang and Rozelle 1996, 362). They acknowledge that institutional innovation may have contributed more to the growth in agricultural output generally, the topic of the studies by Lin and others noted above.[18] Huang, Otsuka, and Rozelle (2007, 19) note that Fan (1991) and Huang and Rozelle (1996) conclude that accounting for technological change, institutional change during the late 1970s and early 1980s contributed about 30 percent of output growth.

Fan, Zhang, and Zhang (2004, 408) raises another important question: the role played by decades of public investment in the success of the growth after the rural reforms. They suggest that the economic reforms that began in the late 1970s could not have achieved such rapid economic growth and poverty reduction had there not been several prior decades of massive government investments in rural infrastructure, especially in irrigation, from 1953–76.[19] Investments in infrastructure and research and development were slow in the 1980s, but major investments in education after 1978 resulted in a substantial improvement in labor quality. Fan, Zhang, and Zhang argue that public investment played a significant role in the growth of agriculture and poverty reduction during 1978–84, accounting for 12 percent of growth and 45 percent of poverty reduction. They concur, however, that 60 percent of production growth in Chinese agriculture between 1978 and 1984 was due to the rural reforms.

Sorting out the relative role of the various measures is difficult because they interact and re-enforce one another. But there is a broad consensus built on solid survey data and sophisticated econometric analysis that the institutional reform creating the HRS was the primary factor responsible for remarkable output growth between 1978 and 1984, accounting for roughly 40–60 percent of that growth.

[18] Lin (1991) reviews adoption of hybrid rice in Hunan Province and the impact of the introduction of the HRS on adoption. He finds that during the collective period, adoption of hybrids did not correspond to economic rationality and was the result of political promotion. After the transition, economic rationality (farmer costs and benefits) became the major factor in adoption. Adoption of hybrids continued to rise, although the reforms slowed it by disrupting the network consisting of the county, brigade, and team research and extension.

[19] Gulati, Fan, and Dafali (2005, 8) note that after 1953 top priority in public investment was assigned to irrigation, which grew at an impressive rate in the pre-reform period. Irrigated area as a percentage of arable land grew from 23.3 percent in 1953 to 26.2 percent in 1957, an increase of 5 million hectares during the first five-year plan period. Ling (1991, 106) indicates that up to the end of 1983, in the administrative district of Laouyang Prefecture in Henan Province alone, government invested Y 450 million, to complete 1 billion cubic meters of earth and stone work. A total of 40,000 projects for flood control, drainage, water and soil conservation, electric power works, and irrigation were carried out.

These impressive levels of agricultural output growth could not be maintained. While overall agricultural growth rates averaged 7.9 percent during 1978–84, they dropped to 4.1 percent during 1984–87, still better than the 2.9 percent for 1952–78 but a clear decline (Lin 1992, 35). The decline after 1984 is attributed by Lin (1992, 87) to the drop in the rate of growth for fertilizer use from 8.9 percent during 1978–84 to 3.7 percent during 1984–87. There was also a swift outflow of labor from the cropping sector. The growth rate of the agricultural labor force dropped to 2.9 percent in 1984–87, compared with 8.6 percent during 1978–84. These declines were due in part to a sharp reduction in state procurement prices. After 1985, although agriculture still grew at the respectable rate of 4.1 percent, the boom in crop production came to an end; the outputs of grain and cotton declined with decreased amounts of land under cultivation. Because the Chinese leadership had long been "grain fundamentalists" who saw self-sufficiency in grain as a central national security concern, some questioned the reform process and even led to discussions among the leadership of possible re-collectivization; at the same time others used these decreases in production to argue that the reform needed to be carried to its conclusion by full privatization (Lin 1992, 3).

Income and Poverty Impacts

Per capita income increased to Y 522 in 1984 from Y 220 in 1978, a growth of 15 percent per year in real income per capita at 1990 prices, contrasting sharply with the pace of the pre-reform period of 2.3 percent per year (Fan, Zhang, and Zhang 2004, 396; Gulati, Fan, and Dafali 2005, 15). Lin (2003, 311), deducting for price factors, estimates that productive net income per capita increased from Y 166.39 to Y 291.10, while per capita cash-in-hand plus the outstanding amount of the savings deposit in rural areas (year-end) increased from Y 26.6 to Y 85.3. Between 1978 and 1983, per capita rural income more than doubled, rising from Y133.6 in 1978 to Y 310 in 1983, significantly improving in relation to urban incomes (Table 4, taken from Renwei 1993,82).

Table 4. Per capita income of rural and urban households

	Income per capita (yuan)		
Year	Rural	Urban	Ratio of urban to rural incomes
1957	73	254	3.48
1964	102	243	2.38
1978	134	316	2.36
1979	160	377	2.36
1980	191	439	2.30
1981	223	500	2.24
1982	270	535	1.98
1983	310	573	1.85
1984	355	660	1.86
1985	398	749	1.88
1986	424	910	2.15
1987	463	1,012	2.19
1988	545	1,192	2.19
1989	602	1,388	2.31
1990	630	1,523	2.42

Sources: Renwei 1993, 82; Ling 1991; State Statistical Bureau various years; State Statistical Bureau 1984b.

Some household income continued to come from collective activities, but this decreased radically over the same period. In 1978, 66.3 percent of family income derived from the agricultural collective and only 26.8 percent from family production, while in 1989, 82.2 percent of family income came from family commodity production and only 9.4 percent from the collective sector (Zong 1993, 282).

Ling (1991, 155) notes that the rate of growth in peasant average per capita income (at constant prices) still increased by 2.1, 9.8, and 7.1 percent in 1985, 1986, and 1987, respectively. Ling makes an important point: those increases were due not just to increases in farm output and rises in prices of farm products, but to an increase in the number of income sources, notably from employment in rural industries or housing construction. Still, even in 1998, agriculture accounted for 60 percent of rural household income (Oi 1999, 622).

How did these increases in income affect poverty levels in China? In the 20-year period after 1981, the proportion of the population living below the poverty line fell from 53 percent to 8 percent. Half the decline in poverty came in the first few years of the 1980s. In 1980, a staggering 98 percent of China's poor lived in the rural areas, and the bulk of the dramatic reduction in poverty during the first years of that decade came from rural areas. The rural poverty rate as calculated by the Chinese government fell from 76 percent in 1980 to 23 percent in 1985. Between 1980 and 1985, relative inequality between rural mean income and urban mean income fell to less than half its 1980 level, flattening out in 1985–90, and rising again to 1980 levels during in the 1990s. Agricultural growth did more to reduce poverty and inequality than either the secondary or tertiary sectors. The share of the urban population in poverty rose from 19 percent in 1980 to 39 percent in 2002 (Ravallion and Chen 2004, 1–7, 52).

A World Bank publication (Harrold 1992, 20) gives somewhat different figures, but it also points to a dramatic decline in poverty during the relevant period. It indicates that the proportion of the population below the poverty line declined from 22 percent in 1978 to less than 10 percent by the middle of the 1980s. By 1990, some 11.5 percent of the rural population and 0.4 percent of the urban population remained in poverty, but still, more than 160 million people had emerged from poverty during the reform era.

How were the increases in income distributed? One of the issues raised concerning the HRS reforms has been the extent to which they have worsened inequality in incomes. Working off such a radically egalitarian and relatively uniform livelihood base as that in rural China, it seems likely that the reforms would have increased inequality, and researchers ask to what degree this was the case. In fact, the distribution of income improved by most measures during the early part of the reform period, as average incomes rose substantially with only a modest increase in inequality. The Gini coefficient of income distribution in the rural areas declined steadily from 0.32 in 1978 to 0.22 in 1982, but thereafter inequality began to increase and the Gini coefficient rose to 0.34 in 1988 and on to 0.42 in 1995 (Zong 1993,78, Griffen, Khan, and Ickowitz 2002) (see Table 5).

Table 5. Comparison of inequality, 1978–86

	Two World Bank estimates of rural Gini ratios	
	(1)	(2)
1978	…	0.32
1979	0.257	0.28
1980	0.237	0.26
1981	0.231	0.23
1982	0.225	0.22
1983	…	0.25
1984	…	0.27
1985	…	0.30
1986	…	0.31

Sources: Khan et al. 1993, 61; Column 1: World Bank 1985, 29-30; Column 2: Calculations made by a World Bank working group on Poverty in Developing Counties, quoted in Ahmad and Wang, 1991, 46.

It appears that the disparities in incomes that developed after 1982 were due to more efficient utilization of resources or differences in production capacity or the amount of physical inputs (Ling 1991, 110, 124). Following the introduction of market mechanisms, regional income disparities among farm households did grow and social tensions were acerbated, but the inequality was not very pronounced and was more equal than the distribution of nonfarm income (Ling 1991, 147, 154). Still, jealousy of wealthy villages and extortion by cadres increased (Zong 1993, 78).

Griffen, Khan, and Ickowitz (2002, 312) ask whether the rise in income inequality after 1988 was one of the consequences of restoring a household farming system. Working with land holdings adjusted or unadjusted for irrigation, they recalculate the Gini coefficient for 1988 and 1995. They find that the distribution of land became more equal between 1988 and 1995. It was not the HRS reform, they conclude, that was the source of growing inequality in rural incomes after 1988, but the growing inequality in nonfarm sources of rural incomes (Table 6.) Fan, Zhang, and Zhang (2004, 397) attribute this worsening inequality to a growing differential in rural nonfarm opportunities among regions. Writing more recently, Khan and Riskin (2005) and Yingying, Hua, and Harrel (2008) reach the same conclusion: the greatest factor contributing to the development of regional inequality in rural incomes was rural enterprise. In earlier stages, wages from rural industry were the key factor, but by 1995 ownership of rural small businesses emerged as the greatest source of rural income inequality. Assets, they note, have replaced labor as the source of income inequality.[20]

[20] While most researchers conclude that the reduction in poverty in the years after 1978 was due to the rural reforms, Fan, Zhang, and Zhang (2004, 408) caution against neglecting the contribution of long-standing and massive public investment in rural infrastructure. They suggest that more than 45 percent of poverty reduction during 1978–84 could be traced to public investment and that this percentage rose to 94.2 percent in 1985–2000.

Table 6. Distribution of land and income in rural China, 1988 and 1995

	1988	1995
Gini coefficient		
Income	0.34	0.42
Unadjusted land	0.50	0.43
Adjusted land	0.47	0.41
Concentration ratio		
Farm income	n.a.	0.24
Unadjusted land	0.02	0.00
Adjusted land	0.06	0.05

Source: Griffin, Khan, and Ickowitz 2002, 312.

Analyses by Fan, Zhang, and Zhang (2004), while suggesting that the impact of the HRS on agricultural growth may have been overstated in some studies due to the neglect of other contributing factors, confirm that more than 51 percent of rural poverty reduction can be attributed to these reforms.

Food and Nutrition Impacts

Hardly any improvement took place in average Chinese per capita food consumption between 1957 and 1974. An official estimate puts the number of people who "suffered from a lack of grain" at more than 100 million in 1977 (Smil 1986, 25). Table 7 presents per capita availability of basic foodstuffs from 1949 to 1984 (Smil 1986, 27).

Table 7. Per capita availability of basic foodstuffs in China, 1949–84

Commodity	1949[a]	1952	1957	1961	1965	1970	1977	1983	1984
Rice[b]	89.8	120.3	136.1	81.2	122.7	134.4	136.3	165.5	172.9
Wheat[b]	25.5	31.9	37.1	21.6	35.3	35.7	43.5	79.8	85.1
Corn[b]	…-	29.6	33.6	…	33.1	40.4	52.3	66.9	…
Soybeans	9.4	16.7	15.8	9.4	8.6	10.6	7.7	9.6	9.4
Oilseeds[c]	4.7	7.4	6.6	2.7	5.0	4.6	4.2	10.3	11.6
Sugar	0.4	0.8	1.3	0.6	2.0	1.6	1.9	3.7	3.6
Fruit	2.2	4.3	5.1	4.3	4.5	4.6	6.0	9.3	...
Meat[d]	…	5.9	6.3	2.9[e]	7.7	7.3	8.2	13.8	14.8
Aquatic products[f]	0.9	2.9	4.9	3.5	4.1	3.9	5.0	5.3	5.9

Sources: Smil 1986, 27; Statistical Yearbook of China 1984; State Statistical Bureau 1985.

Notes: Ellipses (…) = not available in published statistics.

[a.] All figures on availability are divided by the population at midyear except for 1949, for which the year-end figure is used.

[b.] Output is unprocessed grain.

[c.] Includes peanuts, rapeseed, sesame seed, sunflower seed, and other minor seeds. Currently, about 45 percent of soybean production is also used

to press oil.

[d.] Includes pork, mutton, and beef.

[e.] Figure is for 1962.

[f.] Includes fish, shellfish, and seaweeds.

Box 1. Follow the Eggs

In the early years of the reform it was the quantities and varieties of food in the home, shop, and market which so impressed the long-time observer. My own appraisal of the reforms in their early years was very much influenced by an acknowledgement that that quantity of food and quality of diet had improved immeasurably for a goodly portion of the population. Although peasant farmers had previously cultivated grain, grown vegetables, and raised livestock, the production and marketing of these items have brought about major changes in diet while at the same time the proportion of rising cash income allocated to food is declining. In villages, one of my yardsticks for measuring sufficiency for years was whether the household consumed or sold the eggs of their few chickens – now that is an appropriate indicator only in very poor regions. Although village studies show that some poor households and villages are far from receiving sufficient food supplies, for the majority of peasant farmers per capita consumption of grain, meat, eggs, milk, fish, vegetables and fruit has improved immeasurably (Croll 1994, 216).

Piazza (1983) has data from 1950–81, a few years into the HRS. Working with a 1979 estimated energy requirement of 2,160 kilocalories (kcal) per day, he finds that energy as a percentage of requirements reached 100 percent for the first time in 1972, increasing by 4 percent in the following four years, then by 12 percent in the four years of the HRS reforms for which he has data (1978–81). Working with an estimate of net protein utilization of 2.8 grams per day, he finds that, whereas in 1972 it ranged between 104 and 123 percent and was 122 percent in 1978, in 1979–81 it was between 140 and 143 percent.

By 1984 per capita availability of rice was 30 percent above the 1977 level. A 1975 survey gave an average of 2,188 kcal a day, and by 1983, Smil's estimate of per capita availability was 2,450 kcal in the villages and 2,150 kcal in the cities, for a national average of 2,380 kcal a day, though he notes that there were major regional differences (Smil 1986, 34). He estimates that in 1983, 100 million peasants (11 percent of the population) were consuming fewer than 2,100 kcal/day, which he considers a minimum; another 90–100 million were only slightly above that minimum, at about 2,200 kcal per day (Smil 1986, 25, 39). At the same time, variety in the Chinese diet was improving. After 1978, consumption of secondary foods (foods other than grain) rose rapidly (Wakashiro 1989, 18–19; Harrold 1992, 19). Areas sown to various crops reflected this change. In the years immediately following 1978, area sown to grains declined by 8 percent, compared with an increase of the area devoted to economic (nonquota) crops of 40 percent (Vermeer 1989, 85) (Tables 8 to 10). Looking at the bigger picture, Burgess (1997, 333) points out that the universal and egalitarian access to land in rural China was critical to these mass increases in caloric intake, especially the large areas of China in which residents faced food markets characterized by high transaction costs.[21]

[21] Huang and Rozelle (1995, 38) remind us that rural food consumption behavior responds not only to changes in prices and income, but according to different levels of market development in the communities involved. They found that greater market development led to systematic declines in the amount of grain and vegetable consumption by farmers and increases in their demand for meat and fish.

Table 8. Per capita calorific intake, 1965–80

Food	1965 annual consumption (kg)	1965 daily calorific intake (kcal)	1978 annual consumption (kg)	1978 daily calorific intake (kcal)	1980 annual consumption (kg)	1980 daily calorific intake (kcal)
Grain	215.0	1,806.0	23.01	1,940.4	251.0	2,108.8
Meat	7.7	65.4	8.7	75.5	11.1*	94.6
Milk	…	…	1.0	1.6	1.3*	2.3
Eggs	1.4	5.5	2.0	7.6	2.3	8.7
Aquatic products	3.3	4.0	3.5	4.2	4.0*	4.8
Edible oils	1.7	43.2	1.6	40.1	2.3	57.7
Sugar	1.7	18.3	3.4	37.2	3.8	41.3
Others	…	110.9	…	120.3	…	131.8
Total	…	2,053.3	…	2,226.9	…	2,450.0

Source: Wakashiro 1989, 18–19.

Table 9. Per capita annual consumption of key foodstuffs (kg)

	Edible grain	Meat	Eggs	Milk	Aquatic products	Edible oils	Sugar	Alcohol
1965	183	7.67	1.42	…	3.33	1.72	1.68	1.30
1978	196	8.86	1.97	0.95	3.50	1.60	3.42	2.57
1979	207	11.05	2.08	…	3.22	1.96	3.56	2.98
1980	214	12.79	2.27	1.4	3.41	2.30	3.83	3.41
1981	220	12.77	2.44	1.5	3.57	2.94	4.10	4.42
1982	226	13.81	2.53	1.9	3.85	3.54	4.42	5.25
1983	232	14.64	2.96	2.2	4.02	4.03	4.47	5.81
1984	251	15.62	3.91	2.5	4.36	4.70	4.88	6.59
1985	254	16.87	4.98	2.7	4.89	5.13	5.63	7.69
1986	256	17.74	5.27	3.2	5.40	5.24	6.12	9.08
1987	251	17.69	5.56	3.5	5.54	5.66	6.66	10.50

Sources: From Chinese Statistical Yearbook 1988, 803, with the exception of the figure for milk for 1978, which is from Yan Ruizhen 1981, and for 1980 to 1987, Cheng Xu 1988.

Notes: Edible grain is "commodity grain" and includes amounts consumed as processed products that use various grains as materials. Therefore, grain used for making alcohol is included in the edible grain in this table. Meat includes pork, beef, mutton, and fowl.

Table 10. Consumption indicators, 1978 and 1988

Indicator	1978	1988	1988 as % of 1978
Cloth (m sq./person/year)	8.0	12.2	152
Housing space (m sq./person)			
Urban	4.2	8.8	210
Rural	8.1	16.6	205
Wristwatches	8.5	47.0	553
Bicycles	7.7	30.4	395
Food (kg/person/year)			
Pork	7.7	14.9	194
Poultry	0.4	1.8	438
Eggs	2.0	5.8	291

Source: Harrold 1992, 19; China Statistical Yearbook various years.

Did household food plots play a significant role in these increases in food availability and nutrition levels? The land reformed in the HRS was the collective land, which had been used primarily for marketed quota production. Much of the food supply of rural households had long come from the household food plot, that small but intensively utilized plot of land over which families, even during most of the commune period, had management control. Responsibility (collective) land is 84.5 percent of cultivated land, while the private plots are only about 6 percent of cultivated land (Rozelle et al. 2005, 124). References to these plots in the literature suggest they constituted 5–7 percent of farmland and contributed 10–30 percent of household income, with most in the 15–20 percent range Mead (2000). In a study of commune agriculture in the early 1960s, Burki (1969, 38) notes that yields on private plots average more than twice the collective yield. The few available sources indicate that 10–20 percent of peasant time was spent on these plots, and according to one source, 13 percent of fertilizer was applied to them (Mead 2000).

Mead (2000) argues that this was an inefficient allocation of labor and inputs from a community (if not a household) perspective, and he asks how much of the increase in China's agricultural output between 1980 and 1984 can be explained by efficiency gains when farmers shifted labor and other inputs from these plots to their contract land. He estimates that eliminating the favoritism of private plots could potentially have created an average overall production increase of 18.8 percent. But a number of field studies from around the same time indicate that household food plots still received more labor and land-building inputs than responsibility land, probably because these plots had greater tenure security, not being subject to periodic reallocation (Li, Rozelle, and Brandt 1998; Li, Rozelle, and Huang 2000).

Impacts on Population and Public Services

A key unanticipated impact of the reforms relates to household growth. The HRS, by allocating land according to household size, gave households the incentive to have more children. In addition, a larger family was allocated more land, could produce more, and had surplus labor whose members could move into employment in rural industry. The one-child policy was introduced in 1980. This is not to suggest that the policy was initiated to counter the impact of the HRS reform on population, but the reform has been seen by some commentators as one factor in the population growth that the policy sought to address (Renwei 1993, 76–77). The one-child policy has been relatively successful in urban areas but, in spite of sporadic if draconian attempts to enforce it, has largely failed in rural areas. Incentive structures of households are quite different in rural and urban areas, and government exercises more effective social control in urban than in rural areas (Zong 1993, 287).[22]

[22] For a full discussion of the relationship between economic reforms and fertility in China, see Zhang 2002.

Education was also affected, quite seriously. Many peasant families withdrew their children from school to help in their new economic activities. After the rural reform of 1978, the absolute number of students attending secondary school in rural areas declined from 48.2 million students to 27.2 million in 1989. The number of rural junior middle schools was cut in half between 1978 and 1989 while the number of rural senior middle schools was reduced to 14 percent of what it was in 1978.

In addition, the commune's medical insurance system collapsed, and local governments failed to pick up the slack. Many of China's famous "barefoot doctors" went into more lucrative work (Zong 1993, 284, 288).

These effects were transient and to some extent the result of policy reforms unconnected to the content of the HRS reforms. The declines in schooling in part reflected slippage in the transition from schooling provided by the commune to schooling provided by local governments, and earlier levels of students in school were regained and improved over time. The change in provision of medical services, however, reflects the beginning of a reform that increasingly has asked citizens to rely on private medical services and insurance to meet their health needs. Some of these impacts were harbingers of policy changes driven by broader considerations as China managed its transition to markets, and it is not appropriate to assess them simply as effects of the introduction of the HRS.

Property Rights Reform Impacts

The primary thrusts of the property rights reforms have been to reduce periodic reallocation of holdings, to extend the terms of use rights, and to enhance the marketability of the use right. In contrast to the HRS reforms, no consensus has emerged among researchers as to the benefits of these reforms. Ideology and policy preferences for a more or less egalitarian rural society drive an ongoing debate, which Li, Rozelle, and Brandt (1998, 64) correctly describe as "vitriolic."

Some argue that weak and incomplete land rights due to reallocations and restrictions on rentals and other transactions weaken incentives for investments and prevent consolidation of fragmented holdings. They urge greater strengthening of land rights (Wen 1995; Carter and Yao 2004; Zhou 1994; Feder et al. 1992; and Prosterman, Ping, and Zhu 2004). Similarly, Zhang, Li, and Shao (2006, 621–622) are concerned that the HRS has become an obstacle to the development of larger-scale, mechanized grain production. As labor becomes more expensive, they urge increased transferability of the farmland use right to allow specialized grain-producing households to enlarge the size of their farms. Zhu and Prosterman (2007) make a strong case for moving forward on property right reforms.

Others (Kung 1995; Kung and Liu 1996; and Dong 1996) suggest that gains from greater liberalization would not be great, and that farmers themselves do not favor privatization, because they value the assured land access they enjoy under collective ownership. They argue that administrative allocation is often economically rational, favoring efficiency, and urge that China is not ready for full liberalization of the market in land rights, given that credit markets are undeveloped, there is no land registration system, and the legal system is incomplete.

The debate can be seen as one over how a balance should be struck between the production or social security functions of land, both legitimate functions, and how quickly or slowly that balance should shift. What empirical studies have addressed these issues?

Estimating Economic Impacts

Studies of the impact of these property rights reforms are complicated by the fact that the reforms have been highly incremental and that implementation has lagged well behind party pronouncements and laws. A 17-province survey studied implementation of the 30-year land use rights under the 1998 Land Management Law in a 17- province survey. It found that in spite of the absolute prohibition on land readjustments during the 30-year term for land use rights, just under half of the respondents had received the land use right contracts as mandated by the 1998 law, and "many contracts contained provisions that were inconsistent with or in direct violation of national laws and policies governing land readjustments." One in five farmers reported that their village had indeed conducted a land readjustment since the

implementation of the 30-year rights (Prosterman, Schwartzwalder, and Jianping 2000, 524–525). These differences reflect the fact that in what is a de facto highly decentralized system, decisionmaking on implementation largely resides with local and village authorities, rather than the central government (Carter and Yao 2005).

The studies thus seek to explore the impact of property rights by searching out contrasting levels of such rights in different types of plots or in different villages, given that implementation has gone further in some areas than others, and comparing behavior.

Deininger and Jin (2002) examine the impact of stronger land tenure rights in Guizhou Province in the south, which resulted from the province-wide replication of elements in the 1987 Meitan pilot reform between 1994 and 1997. They find that more secure land rights had a significant and positive impact on farmer investment on upland fields, though not on paddy land. They also found an active rental market in use rights (subleases) and suggest that being able to transfer land could have a major impact on agricultural investment. The right to transfer use rights through subleasing is also important, they argue, because this right allows retention of land while having an off-farm job. As to villager preferences regarding reforms, they find a strong learning effect; with overall economic development, the support for prohibition of reallocation increases significantly (Deininger and Jin 2002, 15, 22–24). They obtained similar results in a later study in which they tested for the impact of adequate compensation for land taken through reallocations (Deininger and Jin 2007).

Another dimension to marketability of use rights concerns its potential to address the rigid smallholding structure of Chinese agriculture and the fragmented nature of most farmed holdings. It is often suggested that fragmentation prevents farmers from using indivisible capital items and suggests that earlier marketability of land use rights could allow farmers to consolidate holdings though transactions, thus achieving some economies of scale (see, for example, Zhang, Li, and Shao 2006). Tan, Qu, and Heerink (2005, 225) find that fragmentation is largely supply-driven, but the demand side is affected as well. Households in areas with less access to markets were found to prefer fragmented holdings, so that they could spread risks, crop types, and household labor; stronger demand for consolidation comes with greater market access.

What returns would accrue to consolidation of holdings and creation of larger-scale holdings? Feder et al. (1992, 17, 21–23) found no increasing returns to scale when typical farms were in the range of 0.5–2.0 hectares, suggesting that economies of scale from indivisibility of capital may have been exhausted as farms exceeded 0.5 hectare. They speculate that, for the smallest holdings, size may in part explain the much greater investment in housing than in farmland, suggesting that for those holdings, customized draft services or share ownership of capital assets has not been able to overcome capital divisibility problems. But they find that this effect does not appear to exist above 0.5 hectare, and so they decline to recommend a significant scaling-up.

Other studies tend to confirm that more secure and more transferable property rights would have a positive impact, but the issue of the extent of that impact and the appropriate timing remains. A study of 130 farmers in Fengning County of Hebei Province in northern China found that the right to use land for long periods encouraged land-saving investments (Li, Rozelle, and Brandt 1998, 65, 70). Private plots (household food plots) had 13 percent higher yields and received 18 percent more labor and 14–32 percent more inputs (depending on the input) than collective parcels. The authors note that private plots are sometimes of better quality and nearer villages, and this may account in part for the differences. Testing for how long parcels had been held for a security-of-tenure effect on inputs, they found that it made no difference with respect to short-term inputs such as labor, nitrogen, and animal traction, but it did affect longer-term inputs such as organic manure and phosphate fertilizer. While the results show that land tenure affects agricultural production decisions, the difference between collective and private plots, they caution, is small compared to the private plot–communal land productivity gap that existed in the pre-reform period. Overall, the authors conclude, the differentials are small and may be outweighed by the social insurance role played by collective ownership.

A household study in Hebei and Liaoning in north and northeast China compares plots held for longer or shorter periods of time (Li, Rozelle, and Huang 2000, 8–16). The average length of tenure was

about 21 years for private plots, but 9 years for responsibility plots. On average, farmers used more inputs and produced higher yields on their private plots, and private plot yields were about 24 percent higher. Farmers applied more labor, animal traction, and fertilizers on private plots and generally more inputs on plots held longer. The authors conclude that while tenure rights had a significant and positive effect on yields, it was small. Jacoby, Li, and Rozelle (2002), again working with data from northeast China, explore the impact of reallocation-induced tenure insecurity on investment, focusing on organic fertilizer use because it is understood to have long-term effects on soil quality (as opposed to chemical fertilizers). While the higher risk of land taking significantly reduced application of organic fertilizer, their welfare analysis suggests that guaranteeing land tenure in this part of China would yield only small efficiency gains. Rozelle et al. (2005) use data from the same region, assessing tenure security in terms of the rights enjoyed by farmers in particular villages. They conclude (2005, 165) that providing households with immunity against administrative reallocations boosts investment in land by four hours per *mu.* The above three studies conclude that the potential impacts of strengthening tenure security in this region would be small. Citing Dong (1997, 19), they suggest that this may be because most capital-intensive agricultural investments, such as canal irrigation, drainage, and terracing projects, are undertaken at the village, not the individual, level (Jacoby, Li, and Rozelle 2002, 1444).

Moreover, these three studies take a more sanguine view of administrative allocation than most authors. Whereas they agree with Johnson (1995) that reallocation is driven by egalitarianism and rent-seeking by local cadres, they suggest that reallocation is also a form of "village profit maximization." They note a study that suggests that demographic variables and village dummies explain 75 percent of the variation in household landholdings (Burgess 1997, 134-135). Turner, Brandt, and Rozelle (1998) also found a rational village in which land reallocations seek efficiency within the equity framework.

Rozelle et al. (2005, 165) describe forging a modest efficiency gain from enhanced property rights as an implicit premium for the social insurance provided by collective ownership, with its highly egalitarian distribution. Arguing along the same lines as in their 2000 paper and citing Kung (1995), they conclude that tenure strengthening is not urgent, and it is important that alternatives for the social security function of egalitarian land distribution first be found.

Under the concern about substituting markets for administrative allocations lies an assumption that many rural households, if allowed greater marketability of their rights, would soon render themselves landless. But recent research from Vietnam (Benjamin, Brandt and Giles 2004) suggests that the anticipated growth in landless households has not eventuated in Vietnam because land was quasi-privatized. Huang, Otsuka, and Rozelle (2007, 29) urge both implementation of an alternative rural social security system and continued progress toward privatization of rural land. The two are in fact necessary complimentary measures, and both can be undertaken if China is prepared to make the needed investment in its rural areas.[23]

Democratization of village governance structures, a process begun in a limited way, could provide a path out of this policy bind, letting community institutions make key choices about privatization of land rights. This would replicate the approach taken at the initiation of the HRS. The results, the authors suspect, would be somewhat different in parts of the country where the social security role of land is now less important and those in which it continues to be critical.

As for the HRS reforms, those analyzing reform impacts with the benefit of hindsight will need to decide what portion of growth and poverty reduction has been due to property rights reforms. There are already important contenders for a critical role in those processes. After massive investments in infrastructure, especially irrigation, in the period before the HRS reform, public investment in agriculture declined. Feder et al. (1992, 2) note that from 1979, when the HRS began to spread rapidly, the government's investment in agriculture declined from Y 6.24 billion to Y 3.43 billion in 1983 and partially recovered to only Y 4.68 billion in 1987. Meanwhile, collectives' investments decreased from Y 8.71 billion in 1979 to Y 2.07 billion in 1985. Zhang (1998, 52) provides somewhat different figures on collective investment, but these suggest the same trend: collective investment in agriculture was Y 5.2

[23] For a strong brief by a legal scholar for privatization, highlighting its financial implications, see Palomar 2002.

billion in 1982 but decreased to Y 2.1 billion by 1985. At constant prices, budgetary outlays on agricultural investments (mainly on infrastructure) declined from 11.3 percent of total government outlay in 1978 to only 7.5 percent in 1987 (Kung 1992, 166), and investment in irrigation in 1989 was only 44 percent of that in 1976 (Fan, Zhang, and Zhang 2004, 399). Vermeer (1989, 85–86) makes the point that in the post-Mao era, the growth of the effectively irrigated area has stagnated, which he attributes in part to declining public investment. Both the slowing of irrigation growth and the decline in agricultural infrastructure may, however, constitute a response to the increasing efficiency in use of existing farmland, in which case they are appropriate responses.

Public investment, however, has not been limited to infrastructure. As noted above, Fan, Zhang, and Zhang (2004) have suggested that the growth in 1978–84 (immediately after the HRS reforms) owed more to the earlier public investments than has been acknowledged. They further suggest that for the period 1985–2000, the contribution of public investment to growth was 63 percent, and public investment was the largest source of production growth and poverty reduction. Irrigation development in this period had only a modest impact on growth in agricultural production, but the expenditure on education had a major impact, and spending on research and extension also improved agricultural production substantially. Government spending on rural telecommunications, electricity, and roads also had a substantial marginal impact on poverty reduction.

It may take some time before a consensus is reached on the prospective effects of the property rights reforms and other factors on production, income, and welfare in the years after 1990. There will be less progress to attribute. The terms of trade have run against rural areas since 1990 and the gap between rural and urban incomes has further widened. In addition, inequality among incomes within and among rural areas has increased. The deterioration in the economic performance in the last half of the 1990s left as much as half of the rural population not much better off than 12 years earlier, and the bottom 5 percent were worse off (Benjamin, Brandt, and Giles 2005, 820).

In the meantime, some other, unanticipated effects of the property rights reforms have become clear. This is not unusual. Because land is a multipurpose resource, land reforms tend to have many repercussions. Rural industrialization could be characterized fairly as an unanticipated impact of the introduction of the HRS, having its origin in ad hoc attempts to employ surplus released from a more efficient agriculture. Such unanticipated impacts may affect a large part of the intended beneficiary population, as in the case of women, discussed below, or more narrowly defined groups.

Gendered Impacts

While male and female family members may both benefit from land reforms, it is not unusual for land reforms to also have gendered impacts. They often place women at a disadvantage in some respects. In much of the postsocialist world, the land reforms vesting land in households have in fact meant vesting land in the male household head and so strengthened patriarchal family control (Meinzen-Dick et al. 1997). To what extent has this been the case in China, which prides itself on legal guarantees of gender equality?

Li (1993) explains that women had in theory participated as equals in collective agriculture under the commune system, though women were typically employed in more menial positions and largely excluded from management. In the conversion to the HRS, households received land according to their labor supply. Wives and adult daughters were counted for this purpose, though sometimes given a lesser value than male labor. In the first decade of the system, one of the adjustments made in periodic reallocations was to adjust family holdings to reflect changes in family size and marriages. Rural people follow the *cong fu ju* marriage custom, prevalent throughout China, in which a young man marries a girl from outside his home village and his bride comes to live with his family in his village. When the new wife arrives, the land allocation of the family she joined would at the next opportunity be increased accordingly. She would not receive a discrete parcel of land, but her presence would be counted in determining the overall landholding of the family. Wives and daughters, like other family members, shared in the many benefits of the HRS.

The reforms changed this. Rural industrialization, made possible by the labor surplus revealed by HRS, began to change the roles of women in their households. In Hebei Province, the number of part-time agricultural households grew as male labor moved into local jobs in TVEs. By 1992, 25 percent of village families farmed part time. In those families, women were almost entirely responsible for agricultural production. Tasks formerly done only by husbands (storing grains, food processing, trading produce in farmers' or state markets, building houses and walls, and transporting produce by bike and tractor) became shared tasks. Some jobs formerly considered "skilled" came to be considered "unskilled" and thus appropriate for women (managing pumps, driving a tractor, making adobe bricks, and feeding draft animals). Some activities, however, continued to be reserved for men: setting roof beams when a house is built, digging wells, and guiding a plow. These had been the highly "skilled" jobs in the communes, and local superstitions held that bad luck would follow if these jobs were done by women. Husbands still make important farm management decisions, but now they make them in consultation with their wives, and in some households de facto control of farm management has passed to wives (Li 1993, 37–41; 1997a).

This pattern, while common in most of the country, was not the universal pattern. Zong (1993, 286–289) notes that two distinct patterns of family labor division emerged with the agricultural reforms. In suburban and coastal regions, men involved themselves in primarily nonagricultural activities, and wives or women were responsible for agricultural production. This meant that women's power and control over their labor was partially increased, but at the same time, they were excluded from opportunities outside the fields. The second pattern could be found in remote and inland areas: men continued to dominate agricultural production and women were marginalized into handicraft and service activities. Women, who had at least participated broadly in production activities under the commune system, were in both these models more and more focused on home and farm, while men went out to work in the "modern" jobs.

This has resulted in a revival of patriarchal values as economic productivity and living standards have improved. "Mercenary marriages," in which engagement prices set according to the age of the bride were paid to obtain wives, have re-emerged (Zong 1993, 286, 289). A similar pattern has emerged with respect to inheritance rights. Such rights have far more important implications after the HRS than under the commune system, because household assets have increased. There is a stark contrast between the equal rights to inheritance given to women by national law and the de facto disenfranchisement of women in inheritance under village practice. The prospects for remedying this are not good in the short run, given asymmetrical gender power relations. The problem will become more serious because rates of divorce are growing (Zhang 2003. 272–273).

At the same time, the property rights reforms introduced after 1988, as government sought to limit periodic land reallocations, affected allocations of land to wives moving to their husbands' villages. They had to wait longer and longer for the family they joined to receive this recognition of their labor contribution, and many villages ceased to provide for it altogether. Failure to receive such an allocation became an acute disadvantage later in cases of divorce and widowhood; the divorcee or widow was then seen as having no land entitlement in the village and was often left landless by the husband's family and the village. Organizations such as the All-China Women's Federation lobbied for more frequent reallocations, recognizing that women were being disadvantaged in the reform. They noted with concern that as women took on more responsibility in agriculture, they had less and less satisfactory access to land (All-China Women's Federation 1999).

This issue became the topic of broad public debate and was tackled directly in the Rural Land Contracting Law. The general approach of the new law was presaged in a 1999 interview in the *China Women's Daily* with Du Runsheng, a pioneer of property rights reform in China (Lu and Chen 1999, 9):

> Equality is important, and so the law gives women equal shares with men. But from an efficiency standpoint, it is important that we do not adjust the landholdings too often. That's why when a village distributes land they should not make assumptions about whether women will eventually stay or leave their home village; it should be done

> strictly according to the present population. That's consistent with the Government's guaranteeing thirty-year land rights, giving people the security they need in land. I have learned that there are three situations in which women's land rights are in danger: (1) married women, when they move in; (2) when women marry nonrural residents but stay in the rural areas, and (3) when women are divorced. How to solve this problem? Women, once they marry and move away, should retain their land in their village of origin. Women who marry urban residents, if they still live in the countryside, should have a right to land. Divorced women should keep their existing residential registration and land use rights. These women must have the right to transfer their use rights to others, but they should not be forced to do so. After land has been distributed, and before any new adjustment, women in these situations should not receive new land. The only way land should be shifted from one person to another, between redistributions, is by voluntary transactions.
>
> The Rural Land Contracting Law follows this pattern, stipulating in Article 30:
>
> When a woman marries during the contract term, the contract-issuing party cannot take back her original contracted land unless she receives land where she moves. When a woman is divorced or widowed, the contract-issuing party cannot take her land back if she still lives at her current place of residence or moves to a new place of residence where she cannot get land.

Li and Bruce (2005) note that although Article 30 does not help young women obtain land rights in their husbands' villages, it does purport to protect their land rights in their parental village when they marry and move away (at least until they receive land in the new village, an increasingly unlikely eventuality). The benefits that women derive from this provision depends upon the extent to which families recognize that their daughter retains an interest in the family land and accept that she should be able to derive benefits from it. One authority on women's land rights (cited in Li and Bruce 2005, 276) worried that "women's claim to their land rights runs against the interest of their family, including father, brother, and mother, and means a rebellion against the patriarchal system, a cut-off of the kinship ties . . . women who are ready to do so are unlikely to succeed in practice, because it is unlikely that they will get any legal support." On the other hand, Article 30 is potentially helpful to widows and divorcees, though it is short on details such as how land is to be partitioned in such situations. Enforcement, as with all legal rights in China, is likely to be problematic.

The impact of rural industrialization on the gender division of labor and responsibility in agriculture has already been discussed, but how have women fared with the new TVEs and private enterprises? Women are underrepresented among owners of private enterprises, constituting only 21 percent of this category; the only occupational category in which they are a majority–51 percent–is that of farmers (Khan et al. 1993, 43). A study in Hebei Province, however, found that gender roles in the new industries varied depending upon industry ownership, industrial product, and scale of industry. In privately owned enterprises, mostly family businesses, women were commonly found to be involved in management, but this was not the case in collective enterprises. The product also mattered: for example, in a clothing industry, women were more likely to be heavily involved and to participate in management than in other industries, reflecting a stereotyped identification of the making of clothing as a woman's task. While men were involved in management at all scales of industry, women were notably more involved in management in smaller, family-owned enterprises, often in accounting and financial management. While movement into industrial jobs did not in itself confer on women increased participation in making household decisions, if they participated in management tasks in nonagricultural work, they often participated more prominently in household decisionmaking (Li 1997b).

4. ASYMMETRIC TENURE REFORM AND ITS IMPACTS

The HRS reforms are clearly sustainable; the more relevant question today is whether the system is flexible enough to respond to changing needs as China's economy becomes progressively less agrarian. No land tenure system is good for all time; it must regularly be re-examined in terms of the role it plays in the larger, evolving market economy. In full market economies, land tenure arrangements have a greater ability to adjust through the action of markets and contracts, but this is not yet the case in China. Given that China is in the middle of an economic system reform process, more reforms in the land tenure system may be anticipated. In this context, the government must balance a number of important and to some extent conflicting policy objectives.

Economic growth is clearly the principal objective of policymakers, and land is now making a critical contribution to growth processes. But land still plays a critical role as a social security resource. Access to farmland for all resident households is the critical safety net for members of rural households moving into industry and other nonagricultural sectors. It has come into play recently, as the current worldwide recession has reduced the demand for exports from Chinese industry. Migrant laborers, released by factory closures, have flowed back into their home rural areas. The desire to maintain this role for agricultural land is an important factor in government's reluctance to allow markets to fully replace administrative decisionmaking in determining access to rural farmland. This is the case even though a number of authors argue that as the cost of labor grows, rural land markets need to be freed up to allow consolidation of microholdings into larger units. Earlier in this paper, several authors cited the social security and safety-net role played by rural land as a reason for moving slowly toward full marketability of land. It is equally a reason for government to move as rapidly as possible to establish alternative safety nets for workers from the rural sector. It should not become an excuse for stalling on property rights reforms, which can enhance efficiency in agriculture.

The arguments for moving faster or slower in extending fuller property rights to China's rural farm households have already been reviewed. However, one dimension of this issue that has not been discussed in most of those papers has become a major focus of debate only in the last five years. That is the tenure asymmetry that has been created by discrete tenure reform processes in China's urban and rural land sectors. Property rights reforms have moved much more rapidly in urban than in rural areas. Most land in urban areas is under rights that are readily marketable and valuable, while most rural land still lies outside the market economy, and its value is hard to determine. In the past decades, government has lost some of its concern about rapid urbanization and cities have been expanding at a remarkable rate (Deng 2003). This expansion takes place through cities requisitioning rural land for incorporation into urban areas, a process of questionable fairness that has often created intense social stress and local unrest. To understand this problem, it is necessary to review briefly the development of urban land tenure in China. .

Urban land in China[24] is owned by the state, unlike rural land, which is owned by the rural collectives. Its management has long been delegated to municipal governments, who allocate this land to users. By the mid-1990s, the central government's approval of allocations of public land was only needed for very large pieces of land, the area differing depending on the nature of the land use. Central government retained the authority to retrieve public land from local governments for major investment projects of national interest. But otherwise, local government units have had full management of public land within their boundaries.

As in rural areas, the ownership of land and the ownership of buildings are separate in Chinese law. Buildings may be privately owned, but the land on which they stand is owned by the state and made available to users on contract from the municipality. Holders of urban land have long-term use rights and pay a single, up-front charge when receiving the right to use the land. This pattern was set by the early 1950s. The statutory term of these use rights has regularly been extended, and the right has been freely transferable since a 1988 constitutional amendment allowing transfer of land use rights where provided by

[24] There are few treatments of urban land tenure in English (see Ding 2003).

law. This was followed by an amendment to the same end of Article 43 of the Land Administration Law, and then by issuance of regulations (May 19, 1990. Interim Regulations on Selling and Assigning of State-owned Urban Land Use Right). These allow "the transfer, lease, mortgaging, inheritance and dealing in the state-owned urban land use right for other economic activities, within its use term." Municipalities maintain registers of these land use rights.

The longest use right available in urban areas is that for residential land, which is for 70 years. There is an active market in such land rights, and land values have risen dramatically in recent years, with those appreciations in value accruing to the rights holders. This has opened up a major gap between legally recognized values of urban and rural land and between asset ownership by rural and urban families. This contrast is most pronounced at the interface between the systems, where rural land is converted to urban land by requisitioning.

In the 1990s, demand for new land for urban uses grew rapidly,[25] in part due to a relaxation of legal restrictions, which had partitioned the urban and rural economies into water-tight compartments, including tight restrictions on urban migration. Local government had some public land to reallocate from failed state enterprises but also began to rapidly expand their borders into rural areas, where land was owned by rural collectives. The growth has been phenomenal, encouraged by the tenure duality, which made rural land remarkably inexpensive. Local governments acquired land compulsorily at statutorily specified compensation levels, reflecting agricultural uses and the nonmarketability of that land,[26] and then allocated that land at much higher prices to land developers and end users for urban uses. This created a state monopoly of the primary market for urban land.

This disparity, which is effectively an appropriation by the local government of a legally unrecognized location value in such peri-urban land, has become a source of deep resentment in peri-urban communities facing absorption into municipalities and has been the occasion of serious demonstrations and their violent repression in many areas of the country.[27] For the sake of social peace and to lower social transactions costs, some wealthy cities have begun to pay compensation or provide alternative living accommodations in excess of that required by law, or they hold out the carrot of conversion of the rural land to the coveted urban *hukou* (residence permit), allowing holders to live and work in an urban area. Similarly, they have sometimes encouraged the enterprises or land developers who are to receive the land to negotiate and pay compensation on an informal basis, avoiding legal restrictions (Development Research Center and World Bank 2005, iii). Poorer municipalities have found it more difficult to offer genuinely attractive compensation. Fraud and abuses by local officials seeking to avoid even the minimal compensation requirements by law have been common.

This appropriation of rural land with very limited compensation has generated huge revenues for local governments and major opportunities for land developers. It has also generated significant problems with management of this land and funds derived from it, which are off-budget local government resources. In 1998, the central government approved land banking by local governments. This was done initially to facilitate the takeover of land of failed state-owned enterprises, but local government quickly learned to use this mechanism to manage large amounts of rural land appropriated for future demand. Government units cannot themselves mortgage state land, but a land bank can hold an urban land use certificate, and then loans can be secured with its certificate.[28] This became a common practice by many local governments. Given that the banking sector is still largely public, the potential for collusion and

[25] From 1980 to 2004, the percentage of population classified as urban grew from 19.4 to 41.8 percent (Development Research Center and World Bank 2005, 2).

[26] China's Constitution in Article 10 provides for compulsory taking of property in the public interest subject to fair compensation, but the key terms are not defined. Compensation under Article 45 of the Land Administration Law involves three required payments: (1) a compensation fee for land, 6 to 10 times the average annual output value of the land for the three years prior to the requisition, paid to the collective owner of the land; (2) a resettlement subsidy, also paid to the collective (the standard subsidy is 4 to 6 times the average annual output value, with a maximum of 15 times the average annual output value); and (3) compensation fees to households for structures and standing crops.

[27] For a study of land loss and conflict in Yunnan Province, see van Rooij 2008.

[28] See the discussion of land banking and use of such mortgages by local governments in Development Research Council and World Bank 2005, 23).

questionable lending practices are evident. China's local government units, with their decentralized control over state land, have pursued these opportunities vigorously, and the result has been a financial windfall. This has driven a huge wave of urban infrastructural development and expansion, funded to a large extent from land revenues.[29] The results, as anyone who has visited China in recent years can attest, are phenomenal.

This outcome is based in the property rights asymmetry between urban and rural land, which originates in the gradualism and incompleteness of the rural reforms. The reference to "asymmetrical reform" is from Zhang (2006). Zhang, Li, and Shao (2006, 622) is another source that deals with this problem forthrightly,[30] noting that "The real value of cultivated land is obscured under the present land policy and administration" and that the incomplete property rights reform "prevents cultivated land form being used for other purposes by the peasants, because the use of the land is confined to agriculture by the peasants' use right contracts." Zhang (2006, v) note the importance in this regard of the fiscal decentralization after 1980 and warn that

> … [U]nder the arrangement of fiscal decentralization, local governments compete vigorously to offer various protections on the property rights of investors; on the other hand, local governments and developers attempt to acquire land at the lowest price possible by taking advantage of the loopholes inherent in the Chinese law. Secure investor property rights, together with weak protections on individuals' land property rights, are argued to be one of the major drivers of China's rapid economic growth. But the same factor can veer those individuals being deprived of land into violence and social unrest, which may undermine China's social stability and long-term sustainable growth.

Compensation actually paid is often inadequate even under current legal standards and fails to meet the needs of those whose land is taken. The Development Research Center and World Bank (2005, 11) cite the National Bureau of Statistics figures, indicating that the income of farmers whose lands were requisitioned for urban development plummeted by about 46 percent. There are exceptions. For some wealthy municipalities, where the value of the land converted to urban is very high, it is easy for the municipality to provide compensation, usually in the form of apartments in housing developed under a far denser use plan than prevailed before acquisition. It is a modest price for the municipality to pay for a large area of prime urban real estate.

Increasing standards for compensation will not be enough to solve the problem. It is equally important that the funds reach those who have actually lost out in the transfer of the land to urban status. Funds that are paid out frequently do not reach farmer households. Households receive direct compensation for standing crops and homes, but other compensation for loss of future production and relocation are paid to the collective owner, rather than its affected members. The collectives have often used these funds to create "alternative employment opportunities" for those dispossessed, but the affected families commonly do not receive the jobs created (Development Research Center and World Bank 2005, 11).

The legally induced, artificially low cost of rural land also represents a threat to China's environment. It has created strong incentives for municipalities to build outward rather than upward. In a market economy, land near the urban center will normally be more valuable than on the fringe, but there is a gradual value gradient and there are countervailing considerations that slow down the rapidity of the

[29] Different studies consistently show that land transfer fees account for at least 20–30 percent of total subnational government revenues. Based on a report from the Xinhua News Agency issued on June 24, 2004, total revenues from the land use right transfer fee were as high as RMB910 billion in the past three years (about US$110 billion); and in some provinces, the transfer fee revenues were higher than the governments' fiscal revenues (Development Research Center and World Bank 2007, 15).

[30] The only other current sources that do these topics justice are two thoughtful collaborative reports of the Development Research Center and the World Bank (2005; 2007). The author was part of the Bank team for the first report. Unfortunately, the reports provide remarkably little quantitative information, beyond some local figures from case studies.

spread of urban areas, such as the cost of moving between the fringe and jobs at the city center. In China, the price structure facing municipalities, in their capacity as the monopoly appropriator of rural land for urban areas, looks not like a gentle gradient but a cliff. As one moves across the urban boundary and into rural land, the cost of such land drops precipitously. This threatens fragile natural resources near cities, such as wetlands.

It also runs directly into a strong government policy in favor of conservation of prime farmland. This objective is linked to central government officials' determination to keep China self-sufficient in grain, as far as is humanly possible, a "grain fundamentalism." This security priority is immune to considerations of comparative advantage (a number of South Asian countries can produce rice for less than China). In spite of this, farmland disappeared at an average rate of 685,000 hectares per year between 1996 and 2002, and the rate is accelerating (Development Research Center and World Bank (2005, 17). Government has repeatedly sought through regulatory approaches to limit loss of farmland, but with mixed success. Bruce and Muo (1998), examining the position in coastal Fujian Province, found provincial and local government officials quite ready to admit that they prioritized industrial and other projects far higher than farmland preservation. Regulatory rules could be evaded, and for local officials determined to "develop" their province, were trumped easily by the low cost of rural land. This finding is consistent with those of a recent Development Research Center and World Bank report (2007), which warns that "ultimately… evasive techniques will be difficult to suppress if steps are not taken to alter fundamentally the economic incentive structures that help drive urban expansion at its current rapid pace."[31]

By 2004, the central government had become increasingly concerned about a number of urban/peri-urban land issues related to asymmetric land reform:

1. a tendency of the large revenue stream associated with absorption of rural lands into urban areas to drive urban development outward rather than upward, with serious consequences for maintaining arable land and negative environmental impacts;
2. lack of an adequate legal framework for compensation for rural land absorbed and local abuses of the requisition power, both of which are the source of significant peri-urban unrest and protests in many parts of the country;
3. lack of controls of the use of the huge off-budget funds provided to local governments by land allocations and the extensive corruption associated with the use of those funds;
4. the practice by some municipalities of using public land in their land banks to secure liberal and in many cases questionable loans from state and commercial banks (threatening, in the opinion of some commentators, the stability of the banking system); and
5. excessive dependence by many municipalities on revenue from one-time charges on land when first allocated as urban land, which is likely to prove unsustainable. (A real property tax is sometimes discussed as an alternative.)[32]

The authors do not want to oversimplify the complexities around the difficult issue of who deserves to benefit in what proportion from the appreciation in value of property, which appreciation is driven by a variety of direct and indirect forces. There are many claimants. The point here is simpler. Urban landholders receive significant benefit from the appreciating value of their land assets, much of which has nothing to do with their investments, because their land assets are readily marketable. Rural landholders do not, and the unfairness is palpable. Carter and Yao (2005, 166) comment "This inequality cannot be justified on any grounds and potentially constitutes an explosive factor to China's social stability." The fundamental problem, as the Development Research Center and the World Bank conclude

[31] For a good examination of the impact of farmland loss in coastal Jiangsu Province, see Brown 1995.

[32] These concerns are highlighted in Development Research Center and World Bank (2005), reporting on a research program conducted by the Development Research Center, a research center of the State Council, with support of a team from the World Bank, in which the first author participated.

in their joint 2005 and 2007 reports, is the asymmetry in the development of property rights in land in rural and urban areas. They recommend that "Changes to land policy and practice should be guided by the overall goal of integrating the treatment of urban and rural land. Steps should be taken progressively to integrate urban and rural land markets, rights, planning and administration, including reducing the government's monopoly over the primary market for urban land" (2007, 31). Their 2007 report is a forthright and careful review of options for moving forward in this area. The final step in the process, which began with the HRS experiments in Anhui, will be empowering farmers and other rural people to reap the benefits of the actual value of their land, freed from legal disabilities, to the same extent as urban landholders.

5. KEY FEATURES OF THE CHINESE REFORM EXPERIENCE

We have seen that China is moving by many small steps but with some consistency toward what is effectively a system of private property in long-term and marketable land use rights, while at the same time conserving the principle of state and collective ownership of land. The rights enhancement process has moved more slowly for rural land and moved at different rates for different categories of rural land: residential, construction, and farm land. It is not yet complete. By way of preparation, the country is beginning to build the land administration institutions required for a large impersonal market in land rights, including a national land registration system. Such registration systems are the public infrastructure for the private land market. A key pending objective of reformers is fuller marketability and mortgageability of use rights in collectively owned residential, construction, and farm land.

The small reform steps were not set out in a long-term plan but decided upon in long-running negotiations within the party, more or less intense as performance stimulated concern about rural issues. The land reform was dealt with in the same institutions as other key policy reforms, such as market liberalization, easing of residence controls, the move away from state industrial production, and increasing urbanization. The dialogue on these issues is increasingly public, with participants speaking out in public fora and the discussions being affected by popular demands for strengthened property rights. Reforms to date have raised popular expectations of further reform, and there is genuine excitement among the new middle class about enhanced property rights and the possibility that they will be effectively protected under a rule of law.

At key transition points, China has provided opportunities for and encouraged community-based pilots to test reform ideas, often waiving or simply ignoring current law to do so. It has been well served by these experiments. Experiments at country and township levels with different models for post-collective agriculture continued through the 1980s (Bruce and Harrell 1989) and even into the 1990s (Prosterman and Bledsoe 2000). Visiting China for the first time in 1988, Prosterman was stunned by the ability of a highly planned economy to allow and even promote radical local experiments that were clearly ideologically awkward. These experiments, it should be emphasized, were not risk-free and the local officials who pressed for them and national officials who promoted them showed commendable political courage. The fact remains, they were allowed, and studied, and policymakers did learn from them.

The study and learning from such experiments owes a good deal to the role performed by another institutional player. Research institutions focused on rural issues, although attached to the highest level of government, were nonetheless allowed a fair degree of autonomy in pursing their studies and drawing their conclusions. Notable in years of HRS implementation and the decade following was the Research Center for Rural Development, led by the renowned economist Du Runsheng, cited earlier in this paper. The RCRD was broken up in 1989, after the Tian'anmen Square events, making clear that the license given to such institutes does not extend to active political involvement by their staff, but the role has been taken up by other similar institutions, such as the Development Research Center, and increasingly by researchers in China's universities. The existence of these research institutions and the degree of autonomy given them to reach their conclusions independently is vital to understanding the lessons from local experiments and their transmission into national policymaking.

A profile of a distinctive reform process emerges: (1) a permissive attitude by the central government toward local experimentation, even experiments that violated existing law and policy and were seriously heterodox in terms of ideology; (2) analysis and transmittal of lessons from those experiments into party and government by state-sponsored research institutions with a degree of autonomy; (3) extended dialogue on reform issues within the party and government; (4) reforms initially promulgated through party policy declarations, often with frequent follow-up instructions adjusting reform direction and urging implementation; and (5) enactment of a law or laws consolidating the changes once they were considered to have proved themselves. From a "rule-of-law" standpoint, this is problematic, and some legal commentators have struggled with China's development successes with so

little law. Dam (2006), looking at these issues some years down the line, concludes that there may be more law in China than some commentators imagine, but this was certainly not the case in the years immediately after the Cultural Revolution, when the HRS was implemented. The problem is resolved if it is realized that party declarations did in fact have the force of law in China and in this period may have had more force than law.

Finally, it is worth noting that reform has to a significant degree been driven by the central government, overcoming resistance on ideological grounds at the center and meeting with resistance from provincial and local officials and party cadres. The latter groups have had strong vested interests in the rent-seeking opportunities under relatively weak systems of property rights in a system of public land ownership. Implementation of the reforms has not been easy. Land governance in China is both de jure and de facto decentralized, with most important decisionmaking taking place at local levels. Often, reforms were announced first in terms of allowing local communities to behave in certain ways, for instance, to extend the terms of land use contracts. Later, in light of a tepid response reflecting resistance by local officials, these reforms were made mandatory.

Perhaps the most serious blind spot of reform planners was their early neglect of the potential of courts in enforcing reforms. Development of the legal profession and the rule of law have lagged behind other developments in China, and even today, few rural residents can go to court with any confidence that they will be able to enforce the rights given to them by the land reforms. Reform and capacity-building in the courts are key tasks for ensuring security of tenure: property rights mean little if they cannot be enforced, and rural people need to be empowered to take the initiative to enforce their rights themselves in the courts, rather than relying on local officials to do so.

A key characteristic of the Chinese reforms then was their incremental nature. In a comparative discussion of the reform of socialist policies and economies, the Chinese case is contrasted with the "big bang" reforms in Eastern and Central Europe and the former Soviet Union. The HRS reform was incremental in that it was implemented by community decision, although it actually spread quite rapidly. The property rights reform with regard to rural land has, however, moved quite gradually, and remains incomplete.

Sequencing of land reforms in relation to other market reforms has been critical. Gulati et al. (2005: 47) sketch briefly the progression:[33]

> China's experience indicates that at the outset policymakers withdrew central planning and reduced the scope of procurement while expanding the role of private trade and markets in the allocation of resources. Thus they first created the incentives and institutions required by the market economy and in a subsequent stage, in the mid-1980s, they began to open up markets… It is not so much that the Chinese policymakers had planned this sequence in detail; rather, it came together from a trial-and-error approach in the implementation of reforms. The adoption of new measures through experimentation rather than following a predetermined blueprint increased the likelihood of the success of reforms, since it implied a "learning by doing" approach, or, in the words of Deng Xiaoping, "crossing the river while feeling the rocks" (Chow 2002).

Chinese researchers argue strongly the benefits of this gradual process. Lin (2003, 321–325) notes that for ideological reasons, the reform had to be nonradical, but he argues that gradual reform had many advantages. He observes that most of China's economic reforms have not been implemented at the

[33] von Braun, Gulati, and Fan (n.d., 8-9) provide a similar analysis, emphasizing the "virtuous cycle" initiated by China's market-oriented rural reforms. China "by launching market-oriented reforms in agriculture with its relatively broad distribution of productive assets, was able to ensure that economic gains were widespread and thus build consensus for the continuation of reforms. It made possible the rural industrialization, which was a major factor behind China's rapid poverty reduction after 1985. When rural nonfarm enterprises became more competitive than the state-owned enterprises, the government expanded the scope of policy changes and put pressure on the urban economy to reform. Reforms of the state-owned enterprises in turn triggered macroeconomic reforms, opening up the economy further." See also De Brauw, Huang, and Rozelle 2004.

same time across the country. Reform has been local in nature, both in the case of spontaneous reforms, such as the HRS, and of reform measures imposed by government. He notes that this minimizes risks and that the combination of experimental spontaneous reform and incremental reform can provide timely signals about how and when further reform can maximize gains. It allows the market to be established and fostered gradually. At the same time, incremental reform can make full use of existing organization resources, maintain relative stability, and ensure a smooth transition in institutions. It can also avoid social turbulence and avoid a waste of resources. Finally, because it was not full privatization, he argues, the reform did not allow the development of economic inequalities and conflict. Chen, Jefferson, and Singh (1992) provide a similar analysis, emphasizing the benefit of the opportunities for course corrections provided by incremental reform.

This gradualist approach may also help answer why the Chinese land reform produced such satisfactory results, in spite of its apparently not conforming in two important respects to the conventional wisdom on land reform: the difficulty of scale transitions and the need for security of tenure.

First, the issue of scale transitions. This is as much about a shift in form of production organization as it is about scale of operations, but the two tend to go together. The relative success of the East Asian land reforms of the 1950s (Japan, Korea, and Taiwan) have been attributed to the fact that they were land-to-the-tiller programs, in the sense that most of the holdings received by reform beneficiaries were the same holdings they had farmed as tenants. There was no major shift in the scale of production, and the form of production organization (the family) remained the same (Dorner and Thiesenhusen 1990). This is contrasted in the literature with the Latin American reforms that involved the breakup of *latifundia*, the large privately owned estates farmed as large units with wage labor during the 1960s and early 1970s. Those reforms seem to have suffered from the transition to a smaller scale of production, which theoretically might have been more efficient but did not achieve their potential because they failed to establish input and output linkages for the new small farmers (Thiesenhusen 1989).

The Chinese case involved a breakup of large operating units, the communes, but the gradual nature of the transition allowed for input and output linkages to be maintained through state programs and only gradually shifted to markets. In addition, the Latin American reforms appear to have suffered from the lack of consistency in policy direction and weakness of political will that are characteristic of democracies, while the Chinese reform in this respect was closer to the successful East Asian reforms, which were all carried out by military-dominated governments, or in the case of Japan, by the United States as an occupying power. Both strong political will and the gradual nature of the reform may account for its success.

The second issue has to do with security of tenure, the confident expectation by a farmer that he will be able to keep his land long enough to realize the benefits of his investment, without which he or she may not invest. Clarke (2003) raises the issue. If secure property rights are so important to investment and production increases, how did farmers do so well under the HRS, which over the years of its most impressive returns subjected farmers to both short-term land use contracts and risk of periodic redistribution of land among families? Conventional measures of security of tenure, considered essential for farmer investments in agriculture, include a combination of objective elements such as long terms and inheritable rights, as well as attitudinal elements such as confident expectations. By any of these indicators, the HRS in its early years fell well short of the ideal of tenure security. Why did it not seem to matter?

The answer may lie partly in a failure to consider that whereas security of tenure in a particular parcel may be important for some kinds of investment, secure access to any farmland—not necessarily the same farmland—may be quite adequate to encourage other kinds of investment. This seems to have been the case in China. Most farmers did not invest in land, an investment that would take many years to recoup. Nor did they invest in irrigation, because that was still managed by the state, local governments, and the collective. For the most part, what farmers invested was their labor, and as has been seen, more efficient use of labor accounted for much of the production increase. In the early days of the HRS, labor was constrained by controls on migration, and jobs in rural industries were still quite limited: labor had nowhere else to go but the farm. Rural households did invest in some long-term land building, in

particular, mineral fertilizers. But when reforms were initiated, investment in more secure tenure niches was notably higher than it had been on "responsibility" land. Rural households invested heavily in housing on the more secure residential plots, and they showed a continued preference for investing both labor and other farm inputs on the more secure household food plots. The conventional understanding of the relationship between security of tenure and investment seems to hold, so far as it is relevant.

Learning from China: Lessons for Developing Countries

Today China is exporting a remarkable variety of consumer goods and ideas to the developing world, and leaders of developing countries are asking what they might learn from the Chinese experience in areas such as land and rural reform.[34] To what extent are successful Chinese reform models relevant to other developing countries? Care is needed in deciding this, because the social and economic context of the importing countries and their human and natural resource endowments will usually be quite different. When it undertook the reforms, China was a country with serious land scarcity coming out of a collective agriculture context, with a political system that could exert relatively tight control over population movements and growth and provide the political stability to allow a persistent pursuit of reform. These are not the characteristics of many developing countries. But are there some factors in the Chinese reform experience to which developing country policymakers should pay close attention in thinking through their own reform programs?

At the outset, it should be noted that there are some areas in which the Chinese model does not deserve replication. It has been slow to recognize and even slower to find realistic solutions to problems faced by women in the land reform, a failure it has in common with most post-socialist states. In addition, although Chinese reformers have made a solid case for the advantages of incremental reform, China's extension of more adequate property rights to rural people has been, not simply gradual, but painfully slow. It has left the rural population deeply disadvantaged in the process of asset creation in the new market economy by comparison with their urban cousins.

But there are also many positive lessons to be drawn:

1. At an economic system reform level, the key lesson appears to be the proper sequencing of reforms. Policymakers in centrally planned economies embarking on the reform path should first increase incentives for production and build the institutions needed to operate efficiently in a market economy before rushing to open up markets (Gulati, Fan, and Dafali 2005, 46; von Braun, Gulati, and Fan n.d., 8–9).
2. Where labor costs are low and alternative employment limited, small household farms can be remarkably productive if they are provided with ready access to inputs, market prices, and good markets. The Chinese experience is a major validation of the economic understanding that family labor is relatively efficient because labor supervision in large production units is both more expensive and less effective than that in the household. This is a lesson that will be most relevant to countries with low rural labor costs and scarcity of accessible, arable land—a common situation in the developing world.
3. Giving priority to rural reforms, including improving the access of the rural population to productive assets, is highly strategic in terms of poverty reduction. Fan and Rao (2008, 60, 65) conclude that the Chinese experience shows that whenever rural growth is strong, there is rapid poverty reduction. Land is quite equally distributed in China, so even the very poor have access to land, while in India, many of the rural poor are landless tenants and the poverty impacts of rural growth are less dramatic. "This strongly suggests that more equal distribution of production assets will lead to more poverty reduction given the same rate of

[34] Earlier this year, at a conference in Addis Ababa sponsored by InterAfrica/Ethiopia, the authors had a chance to consider the relevance of the Chinese land reform pattern to another national context. Ethiopia is a country whose leadership closely follows the Chinese experience and whose land policies exhibit some similarity to those of China (Bruce 2009; Li 2009). That experience contributed substantially to the thinking about lessons learned as presented in this paper.

growth" (Fan and Rao 2008). This, they conclude, tells us that improvement of the asset base of the poor is one of the best ways to lift them out of poverty. In a poor agrarian economy, this means improving their access to land.

4. During land reform, it is important to maintain existing structures for input supply and output marketing during the breakup of large production units, and the provision of reliable markets for land reform beneficiaries in the early reform years. China provided virtually guaranteed markets for key economic crops in the critical reform years, and reform beneficiaries did not face the problems in this area that have confronted beneficiaries of many other land reforms.[35]
5. Impressive economic growth can take place under public ownership of land if solid use rights are in place and farmers are operating within a larger economic framework that rewards effort and investment. This does not mean that private property may not be the best solution in many cases, but it does indicate that it is not the only adequate solution.
6. If farmers are confident that their land *access* is protected by a strong social commitment to land for all families, enhancing household or individual property rights may not be as urgent as is often imagined. It may be feasible to phase in stronger property rights (including marketability) gradually while building new mechanisms to provide the social security provided by universal land access. Tenure analysts studying China continue to struggle with this issue, seeking to find the right balance between the social security function of land and its growth function. If marketability reforms for rural land lag too far behind those in the urban areas, however, rural people cannot participate in the appreciation of land assets, as do urban people, and they are profoundly disadvantaged by policies that are ostensibly meant to protect them.
7. Policies that emphasize a complementary development of agriculture and industry in rural areas can pay off handsomely if labor is plentiful and cheap and funds are available for substantial public investment in rural infrastructure and facilities to support industry. China's model will be applicable only if a country has substantial labor underemployed in their agricultural sector, but this is not an unusual situation. During the commune period, China laid a base for rural industrialization through massive state investment in rural infrastructure and the creation of collective industries. If the dual-sector rural development model is to be adopted, it will require heavy initial investment in rural infrastructure and facilities.
8. An eighth lesson, or rather a set of lessons, concerns reform processes, which are important. These lessons may be the most broadly relevant because they are less tied to China's particular circumstances. Reforms will be beneficial if government creates the political and legal space for local experimentation, with a pragmatism that tolerates experiments with models radically different from the country's land tenure orthodoxy. Major benefits also flow from giving relatively autonomous research institutes exceptional entrée to circles of power, so that learning from the field is conveyed to those circles.
9. Finally, incremental reform can have important benefits, allowing learning by doing and course corrections during implementation, the use of existing organizational resources, avoidance of social turbulence and waste of resources, and a smoother transition to new institutions in the longer term. Such reform, however, requires strong political will and a steady purpose, and these may not be present in many country contexts.

[35] This was made possible, it should be noted, by China's large unmet urban demand for agricultural production, which provided ready markets for increased production. Export markets might be able to play this role in developing countries with smaller urban populations.

Conclusion

The reform of the HRS and the other reforms it sparked have had a profound positive influence on China's growth and the welfare of its people. It is an incomplete reform, however, in that rural property rights remain limited and weak. This has created a dualism in land tenure, which works to the serious disadvantage of rural people. But unfinished land reform business is not unusual. As economies develop, tenure institutions must be adjusted as well to meet new needs and challenges. To paraphrase Mao, there appears to be a need, not for permanent revolution, but for permanent reform.

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